extile

min for A new series of articles entitled 'Notes from the Wool Dyer' begins in this issue on Page 18. Installments should be useful to anyone handling wool or part-wool textiles.



NON-FLUID

April 21, 1896-1946. As we celebrate our fiftieth anniversary of lubrication service to industry, the factors which contributed so greatly to our development come to mindlike so many footprints on the sands of time. While we are grateful for the advancements in industry that favored our first fifty years of growth, we feel a special gratitude and loyalty to the many companies who for so many years—either as customers, suppliers or technical collaborators - supported our efforts.

These associations invaluably enriched our experience, and aided our efforts to achieve our present high standing in industry.

We begin our Golden Anniversary better equipped than ever to serve industry. We have no reconversion problems because our war efforts were concentrated solely on the expansion and production of NON-FLUID OIL: We stand on the threshold of a new era-one that we hope and pray will also be the "Golden Age of Man."

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Whether you use flat clearers or revolving clearers, whether eyebrowing is a problem or not—there is a Dayco Roll Covering, specially engineered for your frames. It will increase your production, cut your costs, give you a more uniform yarn.

Try a few Dayco Roll Coverings. Make them show you how many dollars could be saved by using them as standard equipment. Write today for prices and complete information.

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Large reduction of ends down.

More foreign elements removed from yarn.

Specially compounded for uniform wear, lengthening service life.

Equally effective for special types of synthetic and synthetic blends of yarn.

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Not affected by temperature changes.

Oil resisting and static free.

No grooving—less ends down.

Easy to apply.

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FAMOUS DAYCO SYNTHETIC RUBBER PRODUCTS SINCE 1934

TEXTILE BULLETIN . April 1, 1946

C&K STUDIES HOW TO SLOW UP A LOOM-SHUTTLE

...from 30 miles per hour to a dead stop within a distance of 10 inches!

These "still frames" (photos at right), which arrest motion at 1/480th of a second, are clipped from a moving picture taken by the high-speed camera developed and built by C&K.

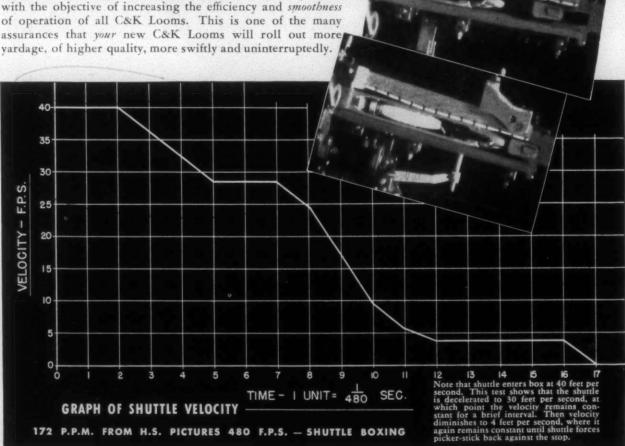
Top photo shows the instant when binder is first contacted by the shuttle . . . which has come flashing across the loom at 172 picks per minute. Now, two things can happen:

The shuttle can slam-bang full tilt into the shuttle box . . . and in the process the yarn will slough off the bobbin, get fouled up, and break.

Or the shuttle can be controlled to a non-slamming stop within less than one foot (shown by the last three pictures).

Time elapsed in stopping the shuttle is 1 30th of a second!

Elimination of yarn-breakage and chatter of the binder are the objects of our search. And this search is another of the many studies being continuously made by C&K engineers, with the objective of increasing the efficiency and smoothness of operation of all C&K Looms. This is one of the many assurances that your new C&K Looms will roll out more



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between Today's Knowledge. and Tomorrow's Looms

VELOCITY - F.P.S. 20

15

10

CONTRACTION CHANGES

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Warp Preparation Equipment

Modern conditions and circumstances in the Weaving Industry have brought about great changes in both the machinery and the auxiliary equipment used in connection with same.

To withstand the greatly Increased Speed at which the Looms and other equipment are forced to operate, the old auxiliary equipment formerly used cannot be expected to stand up under the new conditions.



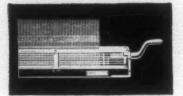
Loom Harness and Warp **Preparation Equipment**

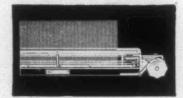
has been designed, built and modernized to meet all the modern requirements.

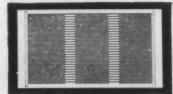
Our Hook Reed Expansion Combs, Scotch Hook Reed and Multi-hook Reed Leasing Devices, Spring Combs, etc., have all been highly perfected and are being used today by most of the mills that have modernized their equipment.

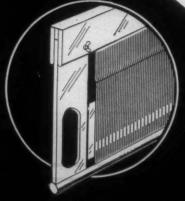
Ask our Local Field Engineer for details











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No V-belts built by anyone before the war had anywhere near the strength and durability that was found necessary on U. S. Army tanks, tractors and self-propelled big guns in combat service. Gates developed these greatly superior V-belts for Army use—and here is why this fact is important to industrial users of V-belts:—

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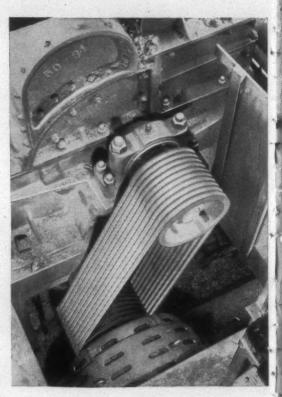
That is why, long before the war was over, you were getting in your Standard Gates Vulco Ropes a product built to far higher service standards than any V-belts ever built by anyone before the war.

And that is not all of the story. Through continuing *specialized* research, the service qualities of these superior Gates Vulco Ropes have been still further improved as all of Gates facilities and energies have been returned to the service of industry.

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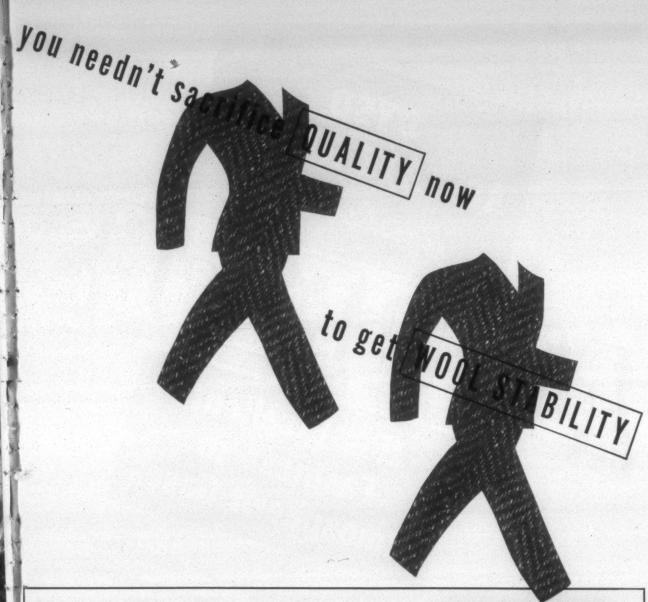




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Most woolens producers today are familiar with treatments for stabilizing their product to get better dimension control, better washability, better all-around service.

But many have hesitated to go ahead with these treatments because the treated fabric was noticeably harsher in hand.

Now, for the first time, Monsanto offers a new melamine type treatment, Resloom, that overcomes this objection.

Woolens treated with concentrations of as much as 20% Resloom retain all the natural wool beauty; they are soft, full bodied, and basically superior

products in both handle and stability to untreated woolens or woolens treated with former chemicals.

UNDER MILL STUDY

Since Resloom builds up a fabric from 10% to 20%, new fabrics are being constructed that actually make Resloom a part of the finished fabric. As our capacity increases we will be enabled to serve more and more mills—possibly yours. Meanwhile we will be glad to send technical data, samples or answers to your specific questions; simply address: Monsanto Chemical Company, Everett Station, Boston 49, Massachusetts.



EVEN EXPERTS fail to find any harshness and difference in the appearance or handle of woolens treated with 20% Resloom and the natural, untreated fabric. But buyers will not be long in appreciating the shrinkage control, the added long-time serviceability!

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The Textile

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Price Controls vs. Production

WE hear a great deal of talk about inflation. Too many people think it can be held in check solely by O.P.A. price restrictions. But let's see first what causes inflation. In the simplest terms, inflation is the result of a combination of an insufficient supply of goods and an excess supply of money or buying power.

To prevent it, you must balance these two factors. You cannot take away the people's money (although the government is doing this to some extent by heavier taxation). The only way then to attain a balance between the two factors is to increase the supply of goods. When a limitation is put on selling prices, however, production is discouraged, and the basic cause of the condition only made worse.

The foundation of our American competitive system is the law of supply and demand. It counter-balances the supply of goods against the supply of buying power. If we encourage production by making it worthwhile to produce, the unbalance would be corrected.

Inflation is buying power competing for the supply of goods. Increase production and you have the supply of goods competing for the buying power. The natural law of supply and demand, if permitted to operate, will make prices find their proper level.

Even on the question of rents—and certainly nobody wants rents to go sky high—arbitrary restrictions by O.P.A. aggravates the scarcity of houses by retarding building. Builders dare not, and will not, risk their money unless they are assured of a fair return for their venture. Rentals are on a pre-war basis, but building costs are not. Yet, the only way to overcome a scarcity of houses is to build more houses. The situation is the same with every commodity.

Many theories sound good on the surface because temporarily they seem to be protecting the public. But you cannot cure inflation until you remove the basic cause—which is lack of goods. Arbitrary price restrictions in any field automatically cause less production, and

the situation is thus made even worse, until growing unemployment reduces the volume of buying power.

It is obvious, therefore, that the only way to avoid inflation is to increase the production of goods. The only way to get an increase in the production of goods is to make it worthwhile to produce; only by making it worthwhile to produce can you pay good wages.

The history of the world has countless instances of political power trying to avoid the law of supply and demand. It can't be done! Prices are inevitably determined by the supply of goods competing for the public's dollar, and full production of goods can only come with an incentive to make a reasonable profit. The Office of Price Administration was necessary in wartime. But the conditions that created the need for O.P.A. no longer exist. If we were realistic, we would soon get back on the track with a program encouraging a volume of production equaling demand.—The Pathfinder.

WAGES rise not with increased productivity, as in the past, but with the proximity of elections when such increases are politically expedient. We are indeed living in an economic anarchy. We are no longer governed by laws of supply and demand; they have been proscribed and have gone underground into black markets. And the void has not been filled by subsidies, priorities and directives, ceilings and floors. Consequently we witness the anomaly of lumber shortages and closed sawmills. They have been deprofited! There are thousands of instances wherein high prices, having been outlawed, can't supply their own antidote by inducing new production and increased production. Hence, women's stockings and men's white shirts are scarce. Scarcities are so much the rule, I doubt if ever a sentence was more frequently used than the current "You can't get it

Production has ever been the only antidote for inflation. I am certain that if the Office of Price Administration

and its kindred agencies were abolished now, price levels a few years from now would be lower than I fear they are going to be. My belief is not actuated by a myopic desire for increased profits. The mode of action I favor differs but my motives are identical with the professed motives of the administrators of these agencies. The middle class, which includes the majority of our shareholders and the majority of our employees, has the most to lose from a runaway inflation, which always brings in its train grave political agitation—sometimes violence.

It would be madness for men like me to advocate following a path leading to the revolutionists' goal. Enough production to satisfy the supply of money demanding it is the only certain checkmate to inflation. Hence, even at the cost of some immediate price increases, the nation will ultimately benefit by opening wide the spigots of production, eliminating all obstructions, voiding artificial restraints imposed by the regulatory agencies, and avoiding, by all fair means, all labor strife.

But this idea is neither original nor novel. Relatively free of unnatural restraints, the economies of many nations survived similar aftermaths of war and have lived to fructify. I fear, however, that this course will prove non-competitive with the splendor of the idea of managing the "period of reconversion" through administrative agencies—which also is neither original nor novel.

It has been said that history is like the Bible inasmuch as it provides apt texts for any sermon. But those who propose to avoid inflation by managing our economy avoid history, for good reason. It is replete with records of similar attempts and their disastrous failures. However, history supplies many apt texts to preach that the concomitant of an ever-increasing national debt is a decline in that nation's fortunes; that its sequel is often a violent change in its polity, as well.—Edgar M. Queeny, board chairman, in report to Monsanto Chemical Co. shareholders.

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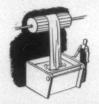
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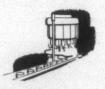
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textile bulletin



Vol. 70

April 1, 1946

No. 3

Chemurgy and Modern Textiles

By DR. F. BONNET, American Viscose Corp.

IT IS not difficult to see the direct connection between agriculture and a man-made fiber like rayon which uses cotton linters or a blend of these with good pulp as the raw material; or the protein fibers more recently obtained from the casein of milk, from soy beans, corn or peanuts. But it may be more difficult to see a direct chemurgic relationship between some of the modern fibers as, for example, glass made of inorganic materials or nylon which it is said is made from coal, air and water, or vinyon from coal, water and salt. However, farmers, chemists and most certainly their wives and daughters are particularly interested in some of these fibers even if chemurgy does not enter the picture of their manufacture. Although chemurgy as related to modern textiles is to be discussed, some consideration will, nevertheless, be given to these non-chemurgic fibers.

The development of commercial man-made fibers for textile purposes is of quite recent origin going back only about 70 years, that is to say, practically within the memory of men still living, but the idea of making such fibers goes back some 300 years and, as is so often the case, the idea was far in advance of the then existing means for producing them. As a matter of fact the idea of itself was not particularly brilliant, ingenious nor novel. Almost any normally intelligent person, observing a spider spin her web or the silkworm spin its double ended filaments into a cocoon which could be unwound to yield threads for the production of the silken raiment of rayalty, would wonder whether somehow it would not be possible for man to devise, make or invent some thick liquid which could, like the fluid generated by the silkworm, be spun away into textile fibers.

Robert Hooke, the English scientist, seems to have been the first to record such observations in his Micrographia in 1664, although there is little doubt that many others had thought about the matter and had even performed experiments on all the various gums, resins and waxes which at that time were known but without success. The actual accomplishment of obtaining a suitable spinning solution from which a textile fiber could be spun had to await developments in chemistry. It was not until the early and middle part of the 19th century that means were provided for actually doing this. The discovery of making nitrocellulose or guncotton in 1846; of Schweitzer's copper ammonia reagent in 1855, and Cross and Bevan's xanthate in 1892, were simply means for dissolving cellulose and the direct steps leading up to the making of man-made textile fibers. Later on this was also accomplished by dissolving and spin-

ning cellulose acetate and other materials. The prime factor in all this was that chemistry had succeeded not only in dissolving cellulose but in regenerating it as a continuous filament either as regenerated cellulose or as a cellulose compound like cellulose acetate.

Just as with most inventions the first results were rather crude, and the yarns were coarse and not very strong, in fact quite weak when wet, but they could be dyed beautifully. In the early days as artificial silk found their greatest use for decorative purposes in embroidery, applique, and millinery, braids, etc., where strength was not an important factor. That was why the first rayon factory in this country built in 1910 was located near Philadelphia with its large embroidery, braid and millinery market. With the commercial success of this new fiber, both here and abroad, it was possible to undertake extensive research work with a view to improving the fiber and eliminating some of its shortcomings.

Cellulose, which is the basic raw material of all rayon, readily fits into the chemurgic picture as a good deal of cotton (as linters) is used for its chemurgic transformation into man-made fiber. In this connection it may be pointed out that spinnable lengths of cotton are not used for the purpose, only cotton linters, which are the fine, short, hairy fibers left clinging to the cotton seed after ginning. This short length cotton linter fiber is much more suitable for chemical reactions than fibers of spinnable lengths since solution takes place more readily from the cut ends. Largely through the efforts of the late Dr. Charles Herty, great strides were made in the development of Southern pine as a source not only of turpentine, pine oils and resin, but also of wood pulp of sufficient purity in high grade cellulose to be useful in the manufacture of rayon.

Before turning to a discussion of some of the newer types of fibers, it may be of interest to briefly review how research in developing rayon has also very largely been responsible for developing other fibers. In studying the chemical and mechanical behavior of cellulose (either cotton or wood pulp fibers) during its conversion into rayon, it was found that stretching the fiber while still in the plastic state caused a decided and very desirable increase in strength. Then an X-ray study of the fibers before and after stretching showed that while there was no pattern effect in the freshly precipitated or regenerated cellulose, the fiber as it was stretched began more and more to show a pattern effect indicative of increasing crystal or oriented structure. The chemical composition of cellulose had, of course, been

known for about 100 years. Analyses had shown that it contained some 44.4 per cent carbon, 6.2 per cent hydrogen, and 49.4 per cent oxygen and that its emperical formula could be written (C₆H₁₀O₅)n. One of the problems was to determine how many (C₆H₁₀O₅) groups made up the cellulose molecule. The technique for making molecular weight determinations of solids had been improved over the years and new methods had been developed. Applied to cellulose they showed a probable molecular weight of between 20,000 to 40,000, depending upon the source and treatment of the raw material, and then in the formula was found to be 185 to 250. From various other considerations it seemed almost obvious that the chemical structure of cellulose must consist of long molecular chains of some 200 C6H10O5 groups or units strung along in a straight chain, each group structurally tied into the next group and so on. Considered in this light it became clear why stretching the yarn while still in the plastic state made it stronger. In solution the individual molecular groups were in a mixed up state like jack-straws, but when tension or stretch was applied to the plastic fiber the long, straight, molecular chains became more and more parallel to each other depending upon the degree of stretch. In other words the molecular structure became oriented. A properly stretched yarn with its molecular structures parallel is stronger because in applying tension the groups are pulled into parallel positions and a greater tension is required to break or pull such molecular bundles apart the more perfectly the structure is oriented. Research along such apparently purely theoretical and often unrelated lines, as determining the molecular weight of cellulose and observing the change in the X-ray pattern of an unstretched and stretched fiber, led to changing rayon from a weak indifferent fiber to one of the strongest, toughest and most useful fibers we have today.



This research work on rayon, thus briefly outlined, was also fruitful in other ways. Once the theory regarding straight chain molecular structures was suggested quite a general interest developed in structural chemistry. Incidentally this theory explained why it was that no textile fiber resulted when some of the natural gums, resins and lacquers were drawn out into threads, as was suggested by Robert Hooke and later by Reamur. The natural compounds which were tried simply did not have the right molecular structure for a textile fiber. On the other hand, some of the modern synthetic plastics do have the proper structure as, for example, nylon and vinyon. When fibers of these compounds are drawn out and stretched to orient the internal molecular structure strong filaments are produced which have successfully entered the field of textiles. Hence following out this

theoretical line of reasoning about rayon more new textile fibers can be expected to make their appearance from time to time.

Rayon's versatility is remarkable. It can be made into a thread or yarn with continuous filaments; or it may be spun as a heavy tow of fine filaments then cut to any desired length for processing on cotton, wool or worsted machinery. The individual filaments may be very fine-finer than the finest hair—even finer than the filament spun by a small spider, or as coarse as horse hair, perhaps 1/64 inch in diameter. The size of rayon yarn is expressed in denier which is the weight of 9,000 meters expressed in grams. Hence a filament of one denier means that it would require 5.6 miles of the fiber to weigh one gram or about 1/28th of an ounce. Then, too, these fibers can be made shiny bright or chalky dull, or they can be mixed and blended with the natural fibers to give other novel effects. It must be clear that the development of rayon has given a veritable field day to the cloth designer and now many of the wartime yarn developments will be added to his list of useful material. Much might still be said about rayon but other more modern textiles must be considered.

Nylon

The truly synthetic fiber nylon, which can claim but little if any chemurgic alliance, is defined as a man-made chemical product, a polyamid which is characterized when stretched and oriented by its extreme toughness, elasticity and strength. The name nylon is a generic one and is applied to a whole group of polyamids. Thus there are nylons with a comparatively low softening point, and others with a high softening point around 600°F. The nylon used for brush bristles is not the same as for stockings. Nylon is quite resistant to water, and moths and its strength can be made far greater than silk. It is not appreciably affected by reducing agents and resists oxidizing agents very well. It is also quite resistant to abrasion; washes and dry cleans well, is not flammable, and is a good insulator for electricity, especially when dry. It cannot be dyed with the ordinary dyes used for rayon, cotton, silk or wool but can be by those which have been developed for acetate rayon. Because of its good tensile strength and its elasticity nylon's peacetime use has been largely in full-fashioned hosiery which hardly needs mention. During the war it found its greatest use in escape 'chutes for which only natural silk has been used before. It was also used for aerial tow ropes because of its excellent elasticity and strength. There is no question that this truly remarkable man-made fiber will find many extensive uses in peacetime applications.

Vinyor

Another man-made and truly synthetic fiber is vinyon, which results from the simultaneous polymerization of vinyl chloride and vinyl acetate in the proportion roughly of 9:1. It also can hardly claim any chemurgic relationship. It, too, is purely a synthetic product derived from natural gas as its basic raw material. Like nylon it must be stretched to orient its straight chain molecular structure to give it good strength and elasticity. It is non-flammable and is not attacked by bacteria, mildew nor insects. It is wholly inert to water, strong mineral acids and alkalis, mineral oils, alcohols, and glycols. Certain organic substances, however, like ketones (acetone) will dissolve vinyon and certain esters halogenated

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No Wicks · Oil-Impregnated Bearings · Vertical Adjustments 88 Hours Between Oilings · Less Oil on Cots and Yarn

This superior saddle does away with wicks. The back-bearing is made of oil-impregnated wood, and requires no oiling. The front-bearing is impregnated bronze, with oil reservoir in hollow screw at top, in which oil is placed only once each 88 hours. Less oil on cots—less oil on yarn.

Due to broad bearing surfaces, the Meadows Saddle does not cock like conventional saddle. This reduces wear on saddle parts and cutting of rollers. Weight is evenly distributed, and rollers held exactly in place.

Saddle may be adjusted both horizontally and vertically, and bearings easily replaced when worn. Stirrup adjustments for any height roll stands. Fits all long draft spinning systems with centers 1-9/16" to 2". Write us, or consult our representatives, for information and prices.

This Meadows Spinning Saddle was formerly distributed by John C. Turner of Atlanta, as the "W-Improved" saddle, but is now being manufactured and distributed exclusively by us.

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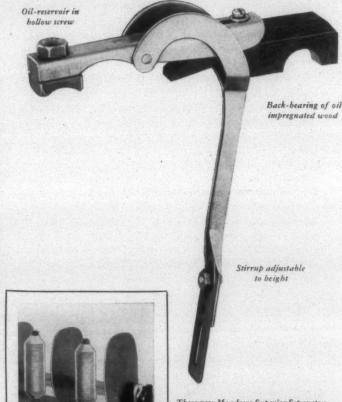
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ATLANTA, GA.

hydrocarbons, amines and aromatic hydrocarbons have a tendency to swell or partially dissolve it, but by and large it is quite inert to the ordinary reagents. It is thermoplastic, that is, it begins to soften at 150° F. and higher temperatures cause it gradually to soften and shrink. New types of vinyon are being developed with a much higher softening temperature. Its most outstanding property is its chemical inertness. The fact that the fibers do not absorb moisture nor swell permits a finely woven vinyon fabric to retain the same mesh in the air as it does immersed in water. The property has made it valuable for bolting cloth and for the finely woven fabric used in screen printing. This same non-absorbent property toward water gives it a wet strength equal to the dry. This property of not swelling in water also makes it inert to all ordinary dyes. However, it can be dyed with water insoluble acetate rayon dyestuffs in the presence of small amounts of certain solid organic chemicals termed assistants like ohydroxydiphenyl. The choice of assistant is important as it influences the fastness of the dyestuff. Recently vinyon fabrics have been pad dyed with acetate colors which is an interesting development. However, there has not been much call so far to dye this interesting fiber as most of its pre-war and war production was consumed in making industrial filter cloths to filter strong mineral acid and alkaline solutions. This resistance to chemical attack, one of its outstanding qualities, was made use of in many manufacturing processes like octane gasoline, synthetic rubber, dyestuffs, pharmaceuticals, to name just a few.

Prior to the war an elastic type vinyon was produced but little use was made of it at the time. But as the acute rubber shortage developed during the war this elastic vinyon was a great boon for medical bandages. As it has somewhat less snappy elastic comeback than rubber it is more gentle in its use as a bandage. Since it was not subject to bacterial or fungi attack in the tropics and did not suffer deterioration like rubber its manufacture during the war was wholly restricted to the armed forces for bandages and various types of elastic cord.

Even before the war experiments were undertaken to raise the softening point of this interesting fiber. During

Fabrics and webbings of Plexon plastic-coated yarn are now reaching consumers. It is used above as book covering, furniture upholstery, lamp shade fabric and decorative screen covering. Chair tright is covered with a multi-striped Plexon in beige, yellow, light green and maroon. Lamp and screen are white. The modern chair uses two-inch Plexon webbing in brown.

the war there was little opportunity to do this. One of the developments using the low temperature softening properties of vinyon has been the production of a thermo-sealing tea bag paper made of the strong type viscose staple with sufficient vinyon staple to give the combination thermo plastic heat sealing properties. The use of vinyon greatly simplifies the sealing operation of the bags and has been found much more satisfactory and economical than any other material tried. It is, of course, of particular importance that such tea bag paper contain nothing which in any way would affect the delicate aroma or taste of the tea, and it is interesting to record that this combination viscose and vinyon staple paper has successfully passed the severest tests of official tea tasters.

Experiments are going forward to develop a range of fibers with different softening points as in the case of nylon and with the hope that some day in the near future women's sheer hosiery, shower curtains, awnings, acid and chemical resisting work clothing, and many other useful fabrics will be made of this interesting fiber.

Velon, Saran, Permalon

Other synthetic fibers rather closely allied chemically to vinyon are these vinylidene chloride derivatives. Narrow fabrics as belts, braces and various types of trimmings made of these materials seem to have found favor with the public. Robe rails and assist cords were introduced in the 1942 automobiles for their decorative value. Tubular braid made into leashes for dogs found a ready sale. Some of the vinylidene material has also found use for special service ropes and cores for wire rope. With good chemical and fungi resistance, high strength, wet and dry, these fibers should find many uses. Saran has been tried out as a rattanlike material for seats on some of New York's Eighth Avenue Independent Subway lines. Most of the fabric trials, however, have been made so far with yarns of rather coarse filaments quite unsuited for the lighter, daintier and sheer type of apparel fabrics but no doubt finer filaments will eventually be made.

The next man-made fibers are truly chemurgic. They are the fibers made from a protein base—from casein, soybean, corn, peanuts, etc. A generic name, Azlon, has been proposed and Rules for Fair Trade Practice are to be set up. The casein type of fiber produced from skim milk has come on the American market under the trade name aralac and is being made by a subsidiary of the National Dairy Products' Corp. A casein fiber called Lanital was made in Italy several years before the war. The process consists in dissolving the fat-free casein from skim milk in an alkaline solution and forcing this into a special precipitating bath through the fine holes of a spinnerette. The filaments from a number of spinnerettes are then combined to form a wet tow which after a number of preparatory operations is cut to the desired staple length for use on regular cotton, wool or worsted machinery.

One of the first uses of casein fibers was in the felting operation in the making of felt hats which are generally made of rabbit hair which has little or no felting property. The same is generally true of rayon staple. By blending the rabbit hair with rayon staple and adding an Azlon type of fiber very satisfactory hat felts have been obtained. Blended with wool, cotton or rayon staple, some very interesting fabrics have been produced. The chemical composition of

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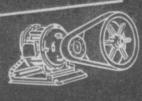








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all the protein fibers is quite similar to that of wool which is, of course, also a protein fiber. In consequence many of the properties of these man-made protein fibers are quite similar to wool. They dye with wool dyes, have the same specific gravity as wool, etc., and have many interesting properties but it is well to point out that they are not wool and are not even intended as a substitute for wool or any other fiber. They are intended rather to be used in blends with wool, rayon, cotton and other fibers to impart a particular characteristic hand or feel to a fabric which they alone seem to supply.

Ramie

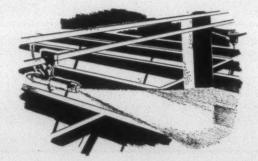
Although this fiber has been known for a very long time (it is said ramie was used to wrap the mummies of Egypt) it has been grown almost exclusively in such Oriental countries as China, India, Japan and more recently in the Philippines. It now promises to become an American industry. A company was formed, after extensive research and experimentation, and large fields of it are now under cultivation in Florida. The greatest difficulty encountered in the handling of all bast fibers, and ramie is no exception, is in the proper separation of the fibers. In the Orient the material is retted and handled by hand but the Florida enterprise seems to have found a way by chemical treatment to recover and refine the fiber on a large scale commercial basis which promises to make it an economically profitable enterprise. Its chief characteristic are its great strength, long staple (six to eight inches) greater wet strength than dry, high luster and satisfactory dyeing features. Hence if the fibers can be obtained economically and sold at a price this long discredited fiber can come into its own and assume an increasing importance in the textile field.

All of the fibers discussed so far have been of an organic

nature, that is to say, made of carbonaceous materials. There is another type of textile fiber which is made of inorganic materials, namely, glass, and which also can hardly be considered in any way chemurgic.

Glass fibers have been known for some time and some novel neckties were made of spun glass at the Columbian World's Fair in Chicago in 1893, but not much was done about glass fibers after that except to make some of the glass wool for special filter purposes until the Owens-Illinois Glass actively started the development of glass and glass fiber products about 1932. Much work was also done subsequently by the Owens-Corning Glass Co. The fiber's outstanding value is, of course, its heat resistance and electrical insulation. Its heat resistance is of particular use in filter cloths used for the filtration of hot and often corrosive liquids. Its insulation value is high both for electrical purposes and for heat insulation especially when in the form of glass wool, sometimes lightly bonded together with a plastic binder. Glass fibers are very strong but have practically no elasticity or extensibility, that is, they are very brittle. Glass fibers both in continuous filament yarns, in yarns of spun (staple) glass, and indeed merely as glass wool have found extensive use during the war which can now be developed for peacetime uses.

Thus very briefly an outline has been given about some of the man-made fibers of today. The development of these fibers did not spring full grown from the idea of any one person. For the thought of producing silk-like fibers, yarns and fabrics had been in the minds of many men for ages, but it was not until certain discoveries in chemistry had been made that means were provided to bring about the realization of this age-old dream. And the discoveries continue. Only a beginning has been made in the production of manmade fibers, but we are on our way to "engineer" fibers with properties best suited for specific purposes.



Function and Maintenance of Humidifying Equipment

By FERNAND MOREAU, JR., Technical Research Laboratories, Oakite Products, Inc.

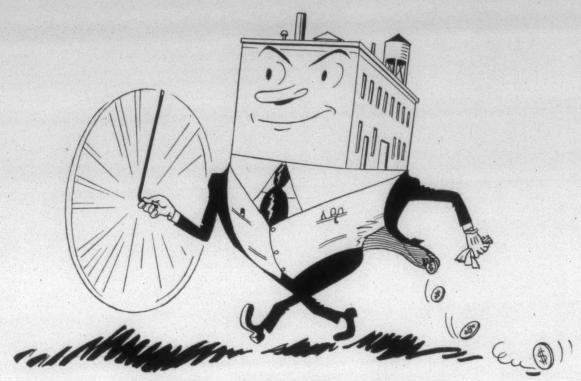
IN December, 1944, things were rather quiet on the Western Front when the Germans launched a devastating counter-attack that had the Allied armies rocking on their collective heels. For six days the Nazis rolled on, shrouded by fog and rain that grounded our air forces. But the seventh day dawned bright and clear, and the overpowering American and British air armada rose to blast Von Runstedt's forces to a defeat from which the enemy never recovered.

The Ardennes breakthrough is a classic example of the importance of weather in war. Had the rain continued a few more days, Allied victory might have been postponed for many months.

Weather is equally important in peaceful activities. It

affects man's operations in scores of different ways. A rainy week-end means the loss of thousands of dollars to concessionnaires at beach resorts and parks. Bakery chains seeking to avoid similar losses, employ meteorologists to furnish up-to-the-minute information on tomorrow's weather. Metropolitan power companies obtain advancantice of thunderstorms so that they may be prepared for the tremendous load created by the turning on of millions of lights.

The weather also has a direct bearing on the production of a wide variety of commodities. The humidity of the air in industrial plants has a direct influence on the physical characteristics of the material being fabricated. This is particularly true with respect to the production of textiles.



HAS YOUR MILL A HOLE IN ITS POCKET?

Why not take stock of your waste room control right now? The fact that in most mills, one-fourth of all cotton fibers bought are resold, not as a finished product but as a by-product, emphasizes the serious drain in profits caused by improper handling, packing and shipping practices in the waste room.

Our wide experience in opening up new markets has shown that profitable repeat business, at good prices, can be built with clean, uncontaminated fibers, preserved by proper handling.

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For example, in textile spinning, winding, twisting, weaving and knitting, the pliability afforded the fibers by proper humidity and temperature eliminates breakage, imperfections and roughage. It also assures proper regain and

uniformity of weights, finishes and quality.

There are many types of humidifying equipment in use today. Essentially, all of them have just one function—the evaporation of water. Two general classifications can be made—the direct and indirect types of humidifiers. The so-called direct type are units placed throughout the plant which break liquid water into a fine mist and disperse it into the plant atmosphere to evaporate. Compressed air atomizers, centrifugal atomizers and compressed air atomizers combined with motor-driven fans are illustrations of this type. The direct type is a centrally located unit which handles recirculated and fresh air and humidifies it in a spray curtain or wet filter. The air is discharged saturated with water vapor but contains no unevaporated water. This type, when supplied with water for humidifying and a reheater, comprises the well-known air conditioning unit.

In most cases all of the units mentioned previously, with the exception of the compressed air atomizer, have provision for returning the unevaporated water to a central supply tank. Any pieces of equipment handling large amounts of water, such as the humidifier and air conditioning units described, are prone to a number of problems. Bacteria and mold thrive in oxygenated water containing organic matter, give rise to foul odors and to slime formation which clogs screens, atomizers, pipes and other

accessory equipment.

Scale deposition is another problem. Evaporation causes the concentration of salts, particularly in areas where hard water is prevalent, causing a clogging of spray jets, pipe lines and equipment interiors.

Corrosion of equipment is accelerated by the dissolved

oxygen in the water as well as the presence of bacteria. Unless this corrosion is controlled and reduced to a minimum it can cost thousands of dollars in ruined equipment. All of these problems resolve themselves to items on the cost sheet when they are considered from the standpoint of down-time on humidifying and air conditioning equipment and the consequent mill down-time. In addition to lost time there is the item of constant maintenance cost for labor used to clean out equipment and keep it clean.

All of these ills can be eliminated or greatly reduced by correct water treatment. This may consist of introducing various prepared compounds to maintain the water on the alkaline side, which serves to keep down corrosion and scale formation. A second material of a germicidal nature may be employed to control algae and bacteria. Some time ago our laboratory began an investigation of all the factors influencing the operators of humidifying equipment with the aim of combining, in one material, all the ingredients necessary to insure efficient performance. The resultant product (Oakite Composition No. 52-Ed.) comes in powder form, is readily soluble in water, is odorless both in dry form and in solution. It is non-toxic and non-corrosive in any concentration normally used. A highly effective germicidal and fungistatic ingredient prevents a build-up of slime and eliminates the foul odors caused by bacteria and mold. A high detergency keeps interior surfaces of the units and piping clean by washing and suspending airborne dirt in the water stream. In mills where a great deal of dust, lint or other matter is drawn into the humidifying system drains become clogged, necessitating frequent cleaning and adjustment. Drains sometimes overflow, damaging machinery or goods beneath the humidifier. Any water treatment capable of keeping dirt in suspension pays for itself many times over in reduced maintenance costs.

To sum up, humidifying equipment is subject to four general maintenance problems—hard water scale, slime and odors resulting from bacteria growth, airborne dust,

and corrosion.



Notes From the Wool Dyer

By A. G. WARNER

THE last 15 years of activity in the Southern textile industry has witnessed steady growth in several fields. These include production of viscose and acetate rayon; weaving, dyeing and finishing of rayon and blended textiles; and, to a smaller extent, increased activity in wool manufacturing. The continuing increase in consumption of wool may not be attributed altogether to wool plants; numerous cotton and synthetic plants are beginning to use the fiber. More widespread consumption of wool yarn and wool shoddy stock requires increased technical knowledge on the part of processing officials in both the manufacturing department and the dyeing and finishing department.

Wool shoddy stock is a subject of real interest to execu-

Beginning below is a series of articles which will, appear occasionally in this magazine. These short installments covering practical processing operations as well as fundamental plant chemistry are directed primarily to Southern dyeing and finishing plants, but will be of interest to the entire textile industry. If requested, special topics and problems will be dealt with by qualified authorities.

tives of plants preparing yarns for blending with natural virgin wool, rayon, cotton or other fibers (and ultimately woven into novelty fabrics). This shoddy stock is shipped to the manufacturing plants from collection centers all over the country, typed either as "rags" or "knits," depending on whether it came from woven or knitted goods. Plants receive the stock in bales of varying weights and quality.

Processing operations required for handling shoddy stock include carbonizing, oiling, garnetting, stripping and dye-

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ing. Carbonization is necessary in order to remove rayon, cotton or linen, as well as rubber—the latter very difficult to delete. Smaller plants have not found it economical to operate carbonizing units, so they secure shoddy which is carbonized by jobbers located throughout New England and the Philadelphia area.

Baled and carbonized stock usually is lubricated with an oil emulsion, then garnetted (an opening and cutting operation somewhat similar to that carried out on cotton) in order to encourage levelness when stripping and dyeing. In an effort to speed processing, a number of experiments have been carried out with the objective of eliminating oiling and garnetting operations. It has been found in a majority of tests run to date that omission of oiling and garnetting will result in stock which is relatively poor in penetration and levelness when stripped and dyed. This is particularly true of shoddy stock which is to be wet processed in rotary (revolving) type machines, since the knit or rag stock will become bundled into balls which cannot be penetrated uniformly by the stripping and dyeing solu-

If a dyehouse is equipped with wool raw stock machines or the older type of wood dye vats where the stock is poled, carbonized shoddy can be stripped and dyed without excessive tangling. Dyed stock then can be oiled and garnetted ready for the manufacturing department, thus saving labor, time and expense of oiling prior to wet processing. It is possible to adapt cotton raw stock machines for the dyeing of wool shoddy stock by building supporting inner frames which would divide dye lots into smaller units. The inner frames should have holes of appropriate size in order to allow proper circulation of the liquor. By making such changes a cotton raw stock machine's capacity would be reduced 25 to 30 per cent, but overpacking would be pre-

Stripping and dyeing operations for shoddy are carried out as follows: make up a scouring bath of two to six per cent ammonia, give steady boil for 30 to 60 minutes; drop bath and give cold running wash; for stripping, bring up in fresh bath and add 11/2 to three per cent concentrated sulfuric acid; raise to boil and add (slowly) four to eight per cent zinc sulfoxylate formaldehyde; run at boil until stock is properly stripped; drop, and in fresh bath add sufficient ammonia to neutralize the residual acid remaining in the stripped stock.

For successful stripping, several precautions should be observed. The use of a pH measuring unit (glass electrode or Macbeth type) is advisable wherever a plant has a competent textile chemist who can check all steps during the stripping operation. If no pH meter is available then the use of various pH test papers is recommended in order to determine whether a sufficient quantity of sulfuric acid has been added to the bath.

The addition of an agent such as zinc sulfoxylate formaldehyde to a bath that is neutral or alkaline will obtain only partial stripping action. Careful control must be maintained in order to prevent too great an addition of sulfuric acid, since an excess in the bath will cause the stripping agent to decompose too rapidly and not give a satisfactory strip when the bath is slightly acid.

The stripping bath must test acid when this operation is completed; otherwise, a dyer may misjudge the strip and assume that the stock has been stripped, when in reality the wool colors will oxidize back in the acid dyebath and possi-

bly cause serious trouble on certain shades. A quick test to determine whether or not a lot actually has been stripped is to take a swatch of stock, neutralize it in weak ammonia, place it in a weak acid solution, wash free of acid, then check for stripped shade against a lot from the machine. If there is no change of shade a dyer can be confident that the shoddy is stripped properly.

When dyeing, production may be stepped up by eliminating the chrome bath through the use of good quality acid colors. It is necessary with a majority of medium to heavy shades to run a chrome bath on selected fast to fulling

For light shades, the stripped goods are dyed at light boil for 30 minutes with selected acid and chrome colors with the addition of five to ten per cent Glaubers salt; then add 31/2 to seven per cent acetic acid slowly; run bath at light boil for 30 minutes, sample for shade; if shade is satisfactory drop bath and give running wash prior to extraction and drying. For some light colors the acetic acid is replaced partially by one per cent sulfuric acid so as to obtain full exhaust of colors. For medium to heavy shades the stripped goods are dyed with Glaubers, acetic and sulfuric for 45 minutes, steam is cut off, one to three per cent bichromate of soda is added slowly in a diluted solution and run for 30 minutes at 200 to 210° F. prior to sampling for shade. Some dyers prefer to sample for shade before adding bichrome on the afterchroming bath, but time is saved if the operation is carried out without delay. When stock is dyed it then is washed, finished, extracted and dried prior to being baled for use by the manufacturing depart-

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Engineering Ingenuity Urged for Rayon

It becomes more and more evident that new, better, faster and possibly radically different means to process rayon into yarns and fabrics should be conceived and developed to take advantage of the ever better processing properties made available in modern fibers, it was stated by Rene Bouvet of American Viscose Corp.'s textile research department in a talk before the American Society of Mechanical Engineers' at Philadelphia, Pa. "This problem constitutes a clear challenge to aggressive thinking and engineering ingenuity.' "Its solution would open tremendous possibilities and un questionably would offer high rewards," Mr. Bouvet said

"Obviously, an industry that calls for repeat operations of such magnitude as the textile industry offers an ideal field for the exercise of mechanical engineering ingenuity, Mr. Bouvet stated. "It is my belief that it should be possible." to conceive machines of a highly specialized purpose to turn out fabrics of standard types faster, better and more economically than has heretofore been possible. As the proper ties of rayon reach new heights through research, the opportunities for creative mechanical thinking and their practical applications in the art of fabric manufacturing will become more and more numerous. The textile field offers to aggres sive mechanical engineering opportunities second to none.

Chemical Industries Exposition Is Held

The 20th annual Chemical Industries Exposition, which was held during the week of Feb. 25 at Grand Central Palace, New York City, was reported to have revealed many new and interesting developments. This first chemical show since Pearl Harbor embraced 375 individual exhibitors, among them some who manufacture and sell to the rayon and textile industries. Rayon yarn producers were conspicuous by their absence at the show. Manufacturers of textile machinery and equipment, textile, chemical and dyestuff manufacturers and producers of plastics were among those represented at the exposition. Among the concerns which exhibited were Owens-Corning Fiberglas Corp. and Riverside and Dan River Cotton Mills.

Carter Firm Represented At Canadian Meet

E. L. Ramsey, vice-president of A. B. Carter, Inc., Gastonia, N. C., and J. McDowell McLeod, engineer for the Carter Traveler Co., Gastonia, recently attended a meeting of the western division of the Textile Society of Canada in Hamilton, Ont. Hamilton Cotton Co. was host. Mr. McLeod, a guest speaker, discussed the selection of ring travelers for specific applications, and their relationship to various processes of textile engineering. He was introduced by Hugh Williams of Toronto, direct Canadian representative for Carter Traveler Co. and Carter Mill Devices Co., divisions of A. B. Carter, Inc.

A.S.T.M. Rayon Definition Favored in Poll

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In a poll of the members of the American Association of Textile Technologists as to whether American or British definitions of the term "rayon" were desirable, the definition of the American Society for Testing Materials, which limits the word to synthetic textiles of a cellulose base, was favored by a large majority of those voting. Votes favoring the A.S.T.M. definition represented 87 per cent, while eight per cent voted for the definition of the Textile Institute of Manchester, England, which would describe all fibers not of natural occurrence as "rayon." Of those voting, five per cent took exception to both British and American definitions.

The A.S.T.M. definition is as follows: "Rayon, n—A generic term for filaments made from various solutions of modified cellulose by pressing or drawing the cellulose solution through an orifice and solidifying it in the form of a filament." The British definition as proposed by the Textile Institute, Manchester, is "Rayon, adj. or n.—A generic

term applied to all fibers for textile use which are not of natural occurrence."

Grex, a direct system of numbering yarn sizes for all types of yarn, has been officially endorsed by the A.S.T.M. Advantages have been seen for this system in numbering spun rayon yarn and blends of rayon staple fiber. Proper comparison between the sizes of yarns spun on the various systems also was described as beneficial. The Grex system is described as a direct numbering system, resembling in this respect the denier system as opposed to the reciprocal system used in numbering cotton and wool yarns. In it the heavier yarn has the higher yarn number.

Azlon, as a generic term for man-made natural protein base fibers, also has been adopted by the A.S.T.M. Fibers to which this over-all term will apply are aralac, fibers made from peanuts or soybeans and other protein materials. Azlon was adopted with the thought that it indicates the nitrogenous nature of the raw material.

T.C.C.A. Issues Fall Rayon Collection

The Confidential Advance Rayon Collection for Fall, 1946, issued by the Textile Color Card Association, features a group of rich, glowing tones captioned Jewels of the Orient. In this group are Royal Lapis, Chinese Topaz, Orient Emerald, Jewel Red, Burma Ruby, Persian Peridot, Flame Opal and India Sapphire. Other groups of tones carried in the collection include Holiday Hues, consisting of pastels and middle tones, and a group of variations in green.

New Insecticide May Kill Boll Weevil

Benzene hexachloride may spell death to the cotton boll weevil. The new British insecticide, American field tests indicate, is more effective, as far as cotton insects are concerned, than D.D.T. or calcium arsenate. However, benzene hexachloride, as a cotton insecticide, apparently has one weakness, scientists of the U. S. Department of Agriculture, who made the tests, announced. It is not as effective as calcium arsenate or D.D.T. for the control of bollworms. Yet, it has no ill effects on cotton plants when used in low dosages.

Numerous Textile Industry Meetings To Be Held This Spring

THE regular meeting of the South Carolina Division of the Southern Textile Association will be held this spring at Parker High School, Greenville, Saturday, April 13. The program will feature three topics, with a question and answer session to follow discussion of each subject. Louis Greet, director of vocational training at Parker High School, will speak on "Pre-employment Tests;" O. F. Davenport of Firemen's Mutual Insurance Co. will discuss "Fire Prevention in Textile Plants;" and Les Cobb of Tennessee Eastman Corp. will cover "Processing of Rayon Staple." John Caughman of Spartanburg, chairman of the division, has urged all interested textile operating executives of South Carolina mills to attend the meeting. It begins at 10 a. m.

Other conventions and meetings of interest to the Southern textile industry include the following: South Central Section, American Association of Textile Chemists and Colorists — Chattanooga, Tenn., April 13; Alabama Cotton

Manufacturers Association — Beuna Vista Hotel, Biloxi, Miss., April 19-20; Southeastern Section, American Association of Textile Chemists and Colorists-Ralston Hotel, Columbus, Ga., April 20; National Plastics Exposition-Grand Central Palace, New York City, April 22-27; Southeastern Industrial Recreation Conference - Charlotte (N. C.) Hotel, April 25-26; Cotton Manufacturers Association of Georgia-General Oglethorpe Hotel, Savannah, May 2-3; Eastern Carolina Division, Southern Textile Association-North Carolina State College school of textiles, Raleigh, May 4; American Cotton Manufacturers Association-Pinehurst, N. C., May 14-16; Carolina Yarn Association-Pinehurst, N. C., May 16-18; Tufted Textile Manufacturers Association-Lookout Mouutain (Tenn.) Hotel, May 31-June 1; Southern Textile Association (annual convention) -Ocean Forest Hotel, Myrtle Beach, S. C., June 6-8; Fifth Annual Cotton Festival—Gastonia, N. C., June 17-21.

MASTER MECHANICS' SECTION



Good Mill Lighting



Part Five of a Series by JAMES T. MEADOR

IN the past two articles we have discussed the general arrangement of lighting in the opening and picker rooms, card rooms with long draft roving frames or slubbers and intermediate or fly frames having high creels, and spinning rooms in which the general treatment of the lighting arrangement was based on the use of individual motor drives on the spinning frames instead of overhead motors and shafting for either the group type or four-frame type drives.

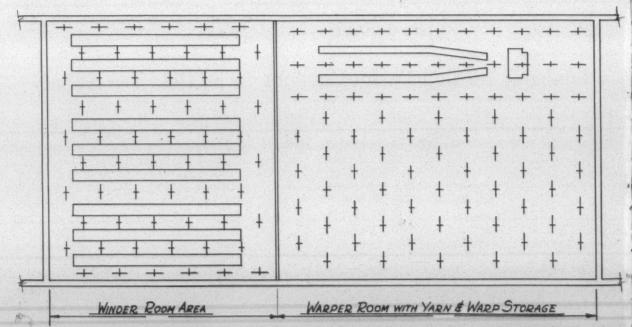
This installment will go into the winder room area. Warpers with the accompanying creel stands and also weave room arrangements for both narrow and wide looms will be covered. In these cases fluorescent lighting is considered in keeping with the trend of progress in the textile industry

toward better lighting for better production.

In the winder room area, as in all other parts of the mill previously discussed, it is quite important to maintain the arrangement of the light fixtures with the length of the tubes parallel to the run of the yarn or, in other words, with the fixtures hanging across the frames, and in the case of the illustration below, also across the mill. This produces the added feature of reduced glare when looking down the length of the mill, which is quite an advantage in maintaining a high level of seeing ability. This arrangement will give a uniform intensity of from 18 to 23 foot-candles of light in the working levels of this area inasmuch as there will be approximately 100 square feet of area average per fixture. This will also provide lighting on all of the working parts of the machine for ordinary maintenance. The above rating is based on the same mounting height as previously suggested, which is ten feet from the floor to the bottom edge of the reflector of the fixture.

Next we go into the warper and creel areas where we find a slightly different arrangement of lighting inasmuch as this area calls for specific fixture location instead of the general arrangement previously referred to in the other departments. In this case there must be fixtures on both the inside alleys of the creel stands as well as on the outside of both sides practically in a continuous run, with the fixtures being mounted end to end for the most effective maintenance of production by the warper operators, as well as their creel hands, who must all have acute visual capacity in keeping up ends, as well as finding broken warp yarns from the creel to the warper. The warper operators need this high intensity of light in order to quickly locate the broken ends and make repairs in the quickest time possible.

The warper storage area, where the cone packages, as well as the finished warps are stored, may be subjected to



Sketch No. 1 shows the arrangement of individual 100-watt, double tube (40 watts each) fixtures over the winder room area as well as over the warper and creek, yarn storage bins and racks.

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HERE'S WHAT YOU NEED IN A

Loom Oil-



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- 1. High lubricity to cut down wear.
- 2. Low gum-forming tendency.
- 3. Good cohesion for minimum drip and creep.
- 4. Washability to remove the "minimum."
- 5. Sure protection against rust.

WHAT SHELL DOES IN PREPARING

Shell Textilis Oils for Looms

Lubrication is the oil's main job. Shell employs highly scientific methods of selecting crude oil stocks—only those yielding high lubricity are used in loom oils. "Oiliness" is improved by compounding straight mineral oils with natural fatty oils.

Gum-Forming is evidence that an oil oxidizes easily. Shell removes all unstable compounds from loom oils by means of a solvent-extraction process.

Dripping and Creeping are largely

eliminated by the selective refining which results in a viscous, cohesive oil that stays put.

Washability is secured by the use of natural fatty oils that readily emulsify with water—gets rid of any trace of oil in the finishing.

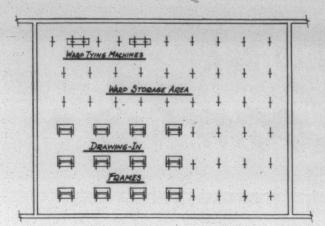
Rust Prevention is a primary problem in the moist atmosphere maintained in the weaving department. Shell fortifies Textilis Oil with a special rust preventive that gives it metal wetting ability much higher than that of water
—means sure protection against rust.

The Shell Lubrication Engineer will gladly give you specific advice on the lubrication of any type of loom, as well as on other mill equipment.

For informative literature about textile machine lubrication, write to Shell Oil Company, Incorporated, 50 West 50th Street, New York 20, New York; or 100 Bush Street, San Francisco 6, California.

SHELL TEXTILE LUBRICANTS





Sketch No. 2 indicates the position of fluorescent tube fixtures over the warp tying machines, drawing-in frames and the warp storage areas.

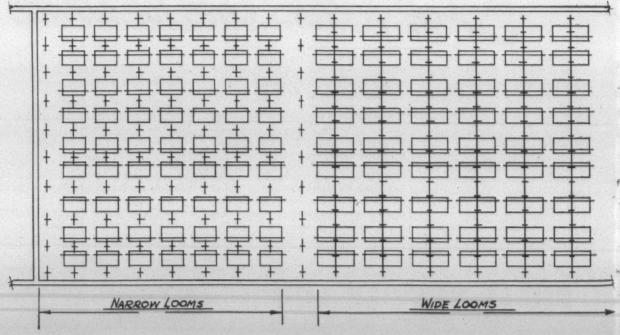
general area lighting of approximately 100 square feet per fixture as shown, inasmuch as no unusual intensity or concentration of light is necessary for this particular area. However, it is vitally necessary that the operators working in this area have adequate light for identification and selection of the packages of yarn to be processed in this department.

We next come to the area of the mill which we have designated as Item No. 7 and which covers drawing-in and warp-tying rooms. The accompanying illustration, while it does not show as many drawing-in frames as might be used in the average mill, will still serve the purpose of illustrating the most effective way for adequate light in such work. This arrangement of fixtures, as shown, follows the general arrangement we have adopted throughout the mill, with the length of the tube parallel to the run of the work. In this case it is more important than ever to provide sharp contrasts in order to facilitate the drawing-in of yarn into the heddle frames. The writer would like to suggest here, however, that any of you who are contemplating the lighting of such areas might light some of your drawing-in

frames experimentally in this manner. This suggestion is made inasmuch as there has been a great difference of opinion among various mill men regarding this particular department, with the result that there are very few drawing-in frames that are anywhere near well lighted and most of them having old-fashioned reflectors with 200 watt lamps which produce only a limited light spread, a great deal of glare, very little contrast, and a considerable slow-down in production. The application of fluorescent lighting in this case would relieve all of these conditions as well as reduce the amount of heat generated by the light fixture as compared to the old-style incandescent light mentioned above. This is really one of the important points in the weaving mill that is in crying need of attention and improvement.

For the tying-in room we suggest the application of the general lighting arrangement of approximately 100 square feet area per fixture average, and at the usual mounting height of ten feet from the floor to the bottom of the reflector. Directly over the bed of the machine it has been found that two fluorescent fixtures placed parallel to each other and approximately five feet apart, with the length of the tube parallel to the run of the yarn, would provide high contrasting effects which would thereby reduce eye fatigue and would increase the speed of setting up the machine for each tying-in operation.

In consideration of lighting over narrow looms the lighting arrangement which has been found most effective is that shown in the accompanying sketch, where a single double-tube 100-watt fixture is hung across each of the two alleys all the way across the mill in a line directly over the center of the looms with the length of the tube again, as mentioned before, parallel to the run of the work or in this case the warp of the fabric. This also has the feature of avoiding conflict with overhead shafting and belting should such be used and will work equally as well or perhaps better and with more usable light on the looms if individual motor drives are used. This will give from 23 to 27 foot-candles of light on (Continued on Page 36)



Sketch No. 3 shows the arrangement of individual 100-watt, double tube fixtures over the narrow looms, and the continuous rows over the wide looms.



HIGH SPEED TRICOT WARPER

This new and outstanding machine introduces a radically new beam-doffing mechanism which doffs in one to one and one-half minutes.

The New Cocker High Speed Tricot Warper has a new type drive which gives constant yarn speed and an adjustable operating speed. It permits gradual acceleration and is equipped with dynamic and magnetic braking. It also introduces an entirely new design of presser roll control.

The New Cocker High Speed Tricot Warper is of extra heavy construction to stand speeds up to 1,000 yards per minute.

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LETIN

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GASTONIA NORTH CAROLIMA

textile bulletin

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Other countries in Postal Union	3.00
Single copies	.10

Textile Bulletin is a member of the Audit Bureau of Circulations and the Associated Business Papers, Inc.

The Senate Labor Committee

Commenting upon the shutdown of the coal mines under the orders of John L. Lewis, the *Charlotte Observer* says:

This stoppage means that manufacturers of hundreds of articles that the public urgently needs will again be interrupted, the scarcities that are already serious will become still worse, and, consequently, real inflation that cannot be warded off by any amount of price control will be that much nearer.

All of this could have been prevented if the Senate labor committee had been more concerned with the public welfare and less intent upon appearing the C.I.O. and its Political Action Committee

Before the labor committee for nearly a month has lain the Case Bill, which was designed specifically to prevent the kind of walkout that has tied up the coal mines, the steel mills, and the manufacturing industries.

The labor committee of the United States Senate was hand-picked by the leaders of organized labor and appointed by their orders.

It is interested in serving organized labor and definitely appears to have little interest in serving the public or protecting industry against unfair practices.

Big Convention

The American Cotton Manufacturers Association advises that hotel reservations for the annual meeting at the Carolina Hotel, Pinehurst, N. C., May 14-16, have broken all records and that the only reservations now obtainable are at other hotels in that vicinity.

The Cotton Manufacturers Association of Georgia announces that requests by textile manufacturers for reservations at the General Oglethorpe Hotel at Wilmington Beach, near Savannah, Ga., have exceeded the supply of rooms and that it has been necessary to cancel the reservations made by machinery and supply dealers and representatives of textile journals such as your editor, and to ask them to secure rooms at Savannah hotels.

It is our opinion that had the Southern Textile Exposition at Greenville, S. C., not been cancelled the attendance of textile manufacturers would have broken all records. In fact, reports indicate large registration at all conventions this year.

Propaganda From High Circles

The people of this country should not be too much influenced by statements made by some persons who are supposed to be spokesmen for the present administration.

While there are many excellent and patriotic government officials, it is well known that President Truman has placed in positions of influence many who have communistic leanings and whose patriotism is subject to question.

We particularly have reference to propaganda directed at the present governments of Spain and Argentina.

We hold no brief for either and recognize the definite German influence in Argentina, but this country is committed to a policy of self-determination for the peoples of all governments, including weak governments, and has declared itself against using either force or pressure to coerce the people of any country to conform their government to the ideas of any outside government or group.

Several years before World War II, when the communists of Russia had ambitions to establish their form of government in all countries, a group of Russians infiltrated Spain and, joining forces with Spanish communists, made a sudden and unexpected attack upon the throne and were successful in seizing the government.

Because of the suddenness of the movement a minority, was able to establish control over the Spanish people and for a time the Spanish communists, with the aid of the Russians, ruled Spain with a ruthless hand.

The Russians gathered unto themselves almost all of the gold in the treasury of Spain and transported it to Russia. (This statement can be substantiated beyond dispute.)

With the gold went many of the Russians who had helped overthrow the Spanish government and an uprising which began in Morocco set in motion forces for the people of Spain to recapture their government from the Spanish communists and their Russian associates.

We were as much opposed to Hitler and Mussolini as other lovers of freedom, but any fair-minded man must admit that it was logical that those rulers should send aid to the Spanish forces which were fighting against the control of their country by the Spanish communists and the Russians.

Many of the Russians having left Spain with their loot of gold, the Spanish communists found themselves short of manpower because they had never included a very large portion of the Spanish people, and also without funds with which to purchase enough arms and ammunition to carry on the struggle.

At that stage American communists, and American sympathizers with communism, went to the aid of the Spanish communists. Large funds were raised in the United States for the support of the Spanish communists and many young Americans were recruited and sent to Spain.

One of the Americans who was active in the movements for the support of the Spanish communists was Frank Graham, president of the University of North Carolina.

Together with 17 other members of the faculty of the

University of North Carolina he signed a paper, addressed to President Franklin D. Roosevelt, demanding that the United States lift the embargo on arms so that "guns and ammunition might be sent to the Loyalists in Spain." The so-called Loyalists were the communists and their Russian allies.

Raising money "for the Spanish Loyalists" became a communist racket and it is estimated that more than \$18,000,000 was raised, but it is doubted that half of the collections ever left the hands of the collectors.

Many of the young Americans who were sent to Spain to assist the communists died in battles while there and somewhere in our files are copies of bitter statements by some who complained that they were tricked and deceived into joining the armed forces of the so-called Spanish Loyalists.

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The war in Spain became a struggle between Spanish communists and the Spanish people under Franco.

Hitler and Mussolini, being enemies of communism, did send military aid to Franco but there is no evidence that Franco was ever an ardent advocate of Naziism.

Unfortunately the war in Spain did afford both Hitler and Mussolini an opportunity to test their war equipment and through those tests they became better prepared for World War II, but they would have had no such opportunity had not Russian and Spanish communists overthrown the government of Spain.

The communists would have been quickly overthrown by the Spanish people under Franco had not the continuation of the struggle been made possible by financial and manpower support sent by American communists.

Many may say "That ain't the way I heard it," for the story we have told is contrary to the propaganda which has been repeatedly put out by those who wish to see control over Spain remain in the hands of communists but it is a true statement and the one most likely to be recorded by future historians.

It is absolutely true that both Hitler and Mussolini gave military support to Franco but there seems to be evidence that the support was given because his opponents were communists rather than that he was an advocate of their form of government.

All during World War II there was propaganda to the effect that Franco was giving support to Hitler and Mussolini but Franco says that his was an attitude of strict neutrality and the record seems to be in his favor.

We would prefer to see the control over Spain in the hands of some man who had not had the support of Hitler and Mussolini but we very definitely do not wish to see it in the hands of a man identified with communism.

Recently some of our government officials have been trying to force the Spanish people to kick Franco out, but they seem to feel that it is a question for them to decide and they are probably aware that some of our high officials are primarily interested in establishing a communist government in Spain.

Spanish people seem to believe that we meant what we said when we asserted that the peoples of all countries should decide for themselves the form of government under which they should live.

At the beginning of the recent contest between Peron and Tamborini for president of Argentina, one of our high officials published a "white paper" blast at Peron in an effort to prevent his election.

Instead of holding to our position for each country to determine for itself its form of government, we sought to assist Tamborini, a man of communistic leanings.

The people of Argentina rebuked us for our effort by electing Peron by an overwhelming majority.

We have no doubt that the German influence in Argentina is strong and we are definitely opposed to what the Germans stand for, but if there is to be self-determination for the peoples of all countries, it must apply to those whose form of government we do not like.

We were against Hitler and Mussolini and are still against their forms of government and all they stood for.

Communists and friends of communism now established in high places in our government seem to see an opportunity to better the position of the communists by making attacks upon governments and officials of governments who have the taint of support given by Hitler and Mussolini or their followers.

We have no right to force or attempt to force Spain or Argentina to change to a form of government which would be pleasing to some of our government officials.

If self-determination for the peoples of all countries of the world means anything, it means that forms of government which we do not like may be established without attempted coercion by us.

We were against Hitler and against Mussolini. We do not like Franco or the German influence in Argentina.

We are also against communism and against efforts by American government officials to force other countries to elect officials tainted with communism.

Growth of North Carolina

The following is a rather interesting comparison of the population growth of two states:

	Civil War	1940
	Population	Population
Virginia	1,600,000	2,677,000
North Carolina	990,000	3,571,000

These figures show that since the Civil War the population of North Carolina increased 2,580,000 as against a 1,077,000 increase in Virginia.

We will not attempt to explain why North Carolina has grown so much more rapidly than Virginia but the comparison does afford an opportunity for interesting speculation.

Of more interest is the burden of state employees which are being supported by the taxpayers of the several Southern states:

	State Employees 1942	Population 1940
Virginia	16,300	2,677,000
North Carolina	14,600	3,571,623
Georgia	6,700	3,123,723
Tennessee	7,700	2,915,841
Kentucky	8,000	2,845,627
Alabama	7,500	2,832,961

Just why there should be so many more state employees in one state than in another is another question which we cannot answer.

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

MAGNOLIA, ARK.—Eighty per cent of the stock of the \$350,000 Magnolia Cotton Mills Co. has been sold to Jackson, Miss., and Lynchburg, Va., interests. Several of the largest stockholders among the 300 investors in the former company sold their holdings, but several leading Magnolia business men retained their stock. New officers of the company, which will retain the firm name for the present, are T. A. Turner of Jackson, president; J. O. Hutcheson of Magnolia, first vice-president; H. A. Stikes of Jackson, second vice-president; and G. C. Gerhart of Magnolia, secretary-treasurer, who recently succeeded J. R. Wikle as manager of the textile plant.

GLENDALE, S. C.—The D. E. Converse Co. plant has been sold to J. L. Stifel and Sons, Inc., of Wheeling, W. Va., for approximately \$2,500,000, based upon the purchaser's offer of \$225 each for the 10,000 shares of common stock. Established in 1856, the plant manufactures cotton drills, sheetings and prints. Equipment includes 964 looms and 33,804 spindles, and the company employs approximately 500 workers. S. J. DuPre is now president of the company, and the purchaser has indicated a desire to continue the present management.

NEWBERRY, S. C.—Controlling stock in the Newberry Cotton Mills has been sold by a stockholders committee to M. M. Clairmont of New York. The firm is capitalized at \$1,000,000 and operates 44,000 spindles and 1,300 looms.

Double Shoals, N. C.—The entire capital stock of Double Shoals Mill Co. has been sold by Tom Moore and associates to Cleveland Mill & Power Co. of Lawndale, N. C. There will be no change in operating policy at the mill, which will be used by the purchasing company to increase production of its twines and cordages. The mill will be under the management of John F. Schenck, Jr., also manager of the plant at Lawndale. The Double Shoals plant has 21 cards, 3,200 ring and 2,090 twister spindles.

West, Tex.—The name of the Brazos Valley Mills has been changed to West Mills, Inc. The offices are now located at 233 Broadway, New York, N. Y.

CLOVER, S. C.—Bocar Mills, Inc., recently organized by Cary C. Boshamer and now under construction, will have 5,000 spindles and will manufacture 10s to 20s from cotton and synthetic fibers. The equipment will be new machinery.

KNOXVILLE, TENN.—Abraham Tabin of Chicago has assumed the presidency of Brookside Mills, Inc., as the result of a change in ownership of the mill and all of its physical assets and inventory. Arthur L. Emery will continue as vice-president and general manager. Thomas Epstein of New York is the new secretary, and Albert Tabin of Chicago, treasurer. The plant heretofore has been operated by Brookside Mills, a Tennessee corporation. Under the new ownership, it is operated by Brookside Mills, Inc., a Delaware concern.

GREENSBORO, N. C.—Work on a \$250,000 expansion for Southern Webbing Mills, Inc., has been started at the plant site on Reidsville Road, five miles north of here. Manufacturers of elastic webbing for work clothing and underwear, the firm would double its facilities with the addition of a two-story brick and steel building with 78 by 116 feet of floor space. This will house new narrow-fabric weaving looms. An office building, 28 by 65 feet, also is under construction. It is expected that the present 50 employees will be doubled in number.

GREENSBORO, N. C.—Construction of a new building for spinning and weaving of synthetic fabrics, to cost "several hundred thousand dollars" and to be the initial step in a larger expansion program, is underway at Revolution Cotton Mills here. The structure will have approximately 90,000 square feet of floor space and will be one story in height. It will be air conditioned and modern in all respects. The building will house approximately 7,000 spindles and 600 looms, all to be new equipment. Present plans, subject to revision, are to make the synthetic goods into napped material for nightwear and sportswear.

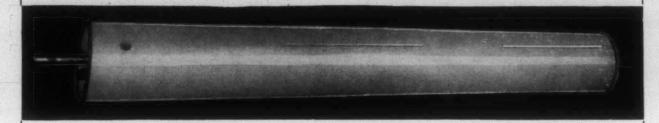
RALEIGH, N. C.—Burlington Mills Corp. will erect a large dyeing plant nine miles north of Raleigh on the Wake Forest highway and adjoining Neuse River. The amount to be invested in the new construction was not divulged. It was learned, however, that the company has bought about 150 acres of land immediately north of U. S. No. 1 bridge over Neuse River. The property will give the company over a quarter-mile frontage on the river, on the Seaboard Railway and on both sides of U. S. 1.

DECATUR, ALA.—The land, building, machinery and equipment of the rayon tire cord plant operated by Goodyear Tire & Rubber Co. here has been sold to the lessee for \$956,720 in cash subject to priority rights of Federal Government agencies. Included in the sale are about six acres of land, the land improvements, a brick, concrete and steel manufacturing building, a garage of similar construction and two wooden hose houses with a total floor area of 104,960 square feet and all machinery and equipment. Actual cost of the plant amounted to \$1,147,146 with the land and buildings costing \$424,708 and the machinery and equipment \$722,438. The present fair value is estimated at \$1,001,924. Goodyear will continue to manufacture rayon tire cord in the plant.

CHARLOTTE, N. C.—Elbert Mills, Inc., of Charlotte has received a charter of corporation and will be established in business here to deal in textiles. Incorporators are Mrs. Ruth E. McDonough, Mrs. Johnsie W. Sanders and Miss Adelaide Criminger. The corporation, which has been assured ample financial support, has an authorized capital of 1,000 no-par-value shares.

COLUMBUS, GA.—A \$40,000 weave room addition at Bibb Mfg. Co. is under construction and will be completed soon. The addition will be 84 by 210 feet, on a one-story plan of brick and steel.

AT HIGH SPEED—BALANCE IS MOST IMPORTANT



Whether you are concerned with the problems of increasing production, or with the improvement of yarn quality . . . we invite you to consult us regarding the advantages of Dynamically Balanced spinning and twister frame cylinders.

Frames fully equipped with these perfectly balanced cylinders permit higher speed, assure uniform quality, eliminate premature bearing failure caused by excessive vibration . . . and save substantially in replacement cost of cylinder head bores, journals, travelers and rings.

Investigate the advantages of







A low cost synthetic organic compound of exceptionally high detergent value. Effective in hard water, acid, or alkaline baths.

BURKART-SCHIER CHEMICAL CO. CHATTANOOGA, TENNESSEE



14" No. 32 Slip-Not Belt, driving 36 cards with 75 h.p. motor, swung on pivoted type ceiling motor base.

This is one among number of such drives giving maximum performance in a large Southern textile mill.

Slip-Not Belts are uniform in thickness; they give maximum pulley contact with less slip, longer life and greater production.

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"BLACKIE" CARTER Greenville, S. C.

S. MESERVEY Decatur, Ga.

TOY E. DOANE Kingsport, Tenn.

SLIP-NOT BELTING CORPORATION

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Promotions, Resignations, Elections,
Honors,
Fransfers, Appointments,
Transfers, Appointments,
Uniform,
Civic
Notes on Men in Uniform,
Notes on Men in Activity
and Associational Activity

PERSONAL NEWS

E. L. Lee has been promoted to overseer of spinning at Bibb Mfg. Co. Mill No. 2, Macon, Ga. G. B. Chastain, formerly assistant to Mr. Lee, has succeeded him as overseer of the Crown, Star and Knitting Departments of the mill. Ernest Griggs replaces Mr. Chastain as assistant overseer.

J. F. Sumner has succeeded H. E. Jenkins as superintendent of Union Mills, Maiden, N. C., a subsidiary of American Yarn & Processing Co. E. H. Timanus is now manager of manufacturing at Nelson Cotton Mills, Whitnel, N. C., now an A. Y. P. unit.

Chester S. Allen has succeeded the late Albert L. Scott as president of Lockwood Greene Engineers, Inc., New York City. He has been a director and vice-president of the firm which he joined in 1910.



D. C. Sanford, left, with the Bristol Co. of Waterbury, Conn., since 1935, has been appointed district manager for the firm's branch office at Birmingham, Ala. He is an electrical engineering graduate of the University of Alabama. At

Birmingham he succeeds H. A. Van Hala, transferred to the company's Cleveland, Ohio, office:

Walter Neale has been elected a vicepresident in addition to his duties as treasurer of Duplan Corp., which has Southern plants at Grottoes, Va., Lincolnton and Winston-Salem, N. C. L. Gordon Hale has been elected secretary of the corporation.

E. A. Terrell of Charlotte, president of Terrell Machine Co., has been elected a governor of the National Patent Council, an organization dedicated to defense of the patent system.

Stanley A. Rygler of New York City is now president of Rhodes-Rhyne Mfg. Co. at Lincolnton, N. C., and H. S. McIntyre of Charlotte is secretary and treasurer.

Four additional members have been added to the Institute of Textile Technology staff at Charlottesville, Va. They are: Dr. Charles H. Lindsley, physical chemist; Dr. Lyle G. Overholser, analytical chemist; Wilson Murray Carr, Jr., assistant editor of Textile Technology Digest; and Dr. Adolph Renold, colloid chemist.

Frank A. Schwerdt has been elected treasurer of Victor Chemical Works, Chicago. He succeeds G. W. Christopher, retired.



Dr. Boris Schwartz, left, has been appointed chief research chemist for Hart Products Corp., chemical manufacturing concern with headquarters in New York City. Upon completion of his technical education in 1942 he was engaged in re-

search on textile chemicals for three years. He is a member of a number of professional societies.

Clifton Powell, assistant overseer of spinning for the McKinney Plant of Texas Textile Mills, has received a pin in recognition of 20 years' service to the organization. Mrs. J. L. Fowler, wife of the plant's night superintendent, has received a 30-year pin.

Goldthwaite H. Dorr, formerly president of the Cotton-Textile Institute, Inc., has been awarded the Medal of Merit for civilian services as head of radio operations for the Army's phychological warfare branch in Europe.

W. E. Hammond, who has completed 70 years in textile manufacturing, has retired as superintendent of Balfour (N. C.) Mills, Inc. J. A. Smyth, vice-president, will take over duties as superintendent.



Charles T. Brown, left, has been appointed Southern representative for American Business Credit Corp. of New York City. Mr. Brown, who until now has been connected with another financial organization serving the textile indus-

try, will make his headquarters at 905 Liberty Life Building, Charlotte.

W. L. (Bill) Gravlee is now representing the Alemite Co. as sales engineer in North Carolina, with Charlotte headquarters. He formerly covered Georgia and Florida for the company.

Ernest Jones has succeeded J. B. Thompson as superintendent of Corsicana (Tex.) Cotton Mills.

James Smith, with J. P. Stevens & Co. at New York City for more than 15 years, has been elected assistant treasurer to replace Nash Eldridge, resigned. Cliff Edwards and Nelson Tower have been named vice-presidents.

Lieut. (j.g.) W. H. Suttenfield, Jr., son of the vice-president and sales manager of American Yarn & Processing Co., Mt. Holly, N. C., was married at Charlotte March 19 to Miss Helen Margaret Colyer of Sydney, Australia. Lieutenant Suttenfield will enter the textile manufacturing business upon his release from the Navy this spring.

BACK TO CIVILIAN LIFE: Henry Morrell, released from the Army following 46 months of service, has been elected assistant secretary and treasurer of Cherokee Textile Mills at Knoxville, Tenn. . . . Jones Y.



Pharr, left, discharged from textile inspection duties at the Army's Charlotte Quartermaster Depot, has been named Southern representative for the New Departure Division of General Motors Corp. With headquarters at Charlotte, he will cover the Carolinas, Georgia of the Carolina

gia and Alabama as ball bearings sales engineer for New Departure. . . . Harry Bottomley, recently discharged from the Army, has been appointed Virginia representative for Wickwire Spencer Steel Co. of New York City.

Four executives of the Kendall Co. were named to new offices at the firm's recent annual meeting at Boston, Mass. Richard R. Higgins, elected vice-president and assistant treasurer, is currently director of merchandising. Theodore Clark, director of manufacturing, also has been appointed a vice-president. H. K. Hallett of Charlotte, general manager of the cotton mill division, has been elected to the board of directors. Benjamin Fisher has been appointed assistant secretary.

W. E. Gladding has been named production director of the nylon division in the E. I. du Pont de Nemours & Co. rayon department. Norman H. Winde succeeds Mr. Gladding as manager of the firm's nylon plant at Seaford, Del. Both have held supervisory positions in Du Pont's Southern plants. William F. McGowan has been appointed manufacturing superintendent of the

Houghton Wool Tops

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MODERN MATERIALS HANDLING EQUIPMENT ENGINEERED TO FIT YOUR REQUIREMENTS

Cleveland Tramrail

Standard Conveyors

E-P Electric Trucks

Barrett Lift-Trucks, Portable Elevators

Nutting Floor Trucks, Rubber Wheels, Casters

Kewanee Coal Conveyors

TECHNOLOGY, or industrial science, means human progress in substituting mechanical equipment for hand labor. In no field are the potentialities greater than the field of MATERIALS HANDLING.



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TEXTILE BULLETIN . April 1, 1946

company's nylon plant at Martinsville, Va. He succeeds Charles E. Mears, who in turn has replaced Mr. Winde as manufacturing superintendent at Seaford.

W. S. Moore is now superintendent of Barbet Mills, Inc., at Lexington, N. C.

Hugh M. Craig has succeeded the late Robert F. Craig as president of Lola Mills, Inc., Stanley, N. C.

OBITUARY

John C. Inge, 55, vice-president and sales manager of A. M. Tenney Associates, Inc., at New York City, died March 28

from injuries suffered in an accident. He is survived by his widow, two daughters and two brothers.

George Frederick Allen, 43, executive engineer for Fulton Bag & Cotton Mills for the past two decades, died recently at Atlanta, Ga.

William Sweeney, 90, one of the founders of Marion (N. C.) Mfg. Co., died recently at Marion. He had been inactive for 15 years.

Walter J. Connolly, chairman of the board of directors of U S Bobbin & Shuttle Co., Lawrence, Mass., died March 16 as the result of a heart attack.

George C. Imes, Sr., 75, superintendent of Highlands Mills, Inc., at Griffin, Ga., since its founding in 1925, died March 15 at Griffin. Survivors include his wife, six daughters, one son and three sisters.

Luther Knowles, Jr., 45, who for 16 years was Southern agent for Clinton (Iowa) Industries, Inc., died last month in a Charlotte hospital. He is survived by his wife, mother and sister.

John S. Palmer, 65, Carolinas representative of U. S. Gutta Percha Paint Co., died March 19 at his home in Anderson, S. C., following a short illness. He is survived by his widow, one sister and two brothers.

For the Textile Industry's Use

EQUIPMENT - SUPPLIES - LITERATURE

Johnson Will Construct Wax Research Laboratory

A wax research laboratory will be erected at Racine, Wis., by S. C. Johnson & Son, Inc. The new laboratory will serve as a companion building to the administration unit and has been designed by Frank Lloyd Wright. Its construction will mark the 60th anniversary of the company. The laboratory will be 15 stories high, built of glass, reinforced concrete and brick.

Desmond Joins Watson In Supply Business

S. P. V. (Pat) Desmond, shown at left below, who was associated for 18 years with Crompton & Knowles Loom Works as sales representative in several Southern states, has resigned his posi-



tion with that company, effective April 1, and in the future will devote his entire time to the affairs of Watson & Desmond, a textile supply distributing firm organized Jan. 1 in association with Clifton E. Watson, right.

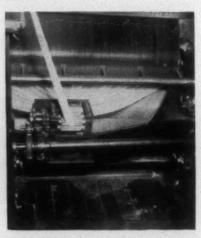
Watson & Desmond handles a complete line of bobbins, spools, shuttles, reeds, heddles, frames, twine harness and belting for the entire South. Among the manufacturers which the firm represents are: Emmons Loom Harness Co., D. P. Brown & Co., Vermont Spool & Bobbin Co. and Watson-Williams Mfg. Co. The firm has head-quarters at 118½ West Fourth Street, Charlotte. Field offices are located at several Southern cities.

Bulletin Describes Action Of Thermosetting Resins

A catalyst to speed up action of thermosetting resins used in finishing textiles is described in a new bulletin, No. 110, of American Cyanamid Co.'s textile resin department. Known as Aerotex Accelerator 187, the product is an acid salt "buffered to give maximum stability and optimum pH." Soluble in water, Aerotex Accelerator 187 is added to the resin bath just before it is ready for use on fabrics. The solution, which is odorless, acts to hasten the polymerization of the resins. The compound has the appearance of fine white crystals and can be stored for long periods of time as it is chemically stable. The bulletin is available on request to the American Cyanamid Co., textile resin department, Bound Brook,

Drawing Process Cut In Card-Sliver Draft

A card-sliver drafting attachment which provides a set of drawing rolls for use on a card has been patented by Prentice M. Thomas and J. H. Barton, 3415 Fourth Avenue, Columbus, Ga. The rolls are said to be capable of drafting up to five, and experimental tests in a large Southern cotton mill are reported to indicate that the use of the attachment will provide the following advantages: (1) decrease the number of ends down, (2) permit a considerable increase in production, (3) reduce the number of doffs by placing more sliver in the can, and (4) make possible the elimination of one process of drawing.



The device (see cut), covered by U. S. Patent No. 2,357,982, issued Sept. 12, 1944, consists of three pairs of grooved metallic rolls mounted on stands which may be adjusted for processing any length of cotton staple. The frame supporting the stands is bolted directly to the frame of the card at a point immediately below the calender rolls, and the drafting rolls may be

operated with or without the card calender rolls. Power for driving the mechanism is transferred from the calender-roll shaft through an arrangement of gears. Draft between the front and middle or between the middle and back rolls can be varied as desired by changing the gear on the end of the appropriate roll.

Friction clearers are provided for removing motes, dust and short fibers which may adhere to the rolls. Sufficient spring weight is applied to the rolls to ensure even drafting in spite of the variation normally prevalent in card sliver. The attachment is of rigid steel and cast-iron construction and is said to have an operating life expectancy equal to that of most basic textile machinery.

Victor Seeks To Supply Phosphate Chemical Needs

The special building, research and development programs instituted to supply the phosphate chemical needs of regular customers during the war when government phosphorus demands were at their peak were outlined by August Kochs, president of Victor Chemical Works, Chicago, Ill., at the annual stockholders' meeting. "Within the last year," Mr. Kochs said, "Victor's laboratories operating under an expanded research and development program involving an expenditure of 75 per cent more funds than in 1944, brought to the commercial application stage several important uses of phosphate chemicals which will prove to be of service to manufacturers of textile products.

"Increased needs of industrial customers are a problem in the face of the continuing shortage of elemental phosphorus," he continued. "We anticipate a solution to these difficulties when the capacity of our new plant now under construction at Victor, Fla., is added to our present output late this year or early in 1947," he said.

New Quaker Detergent Added To Dianol Line

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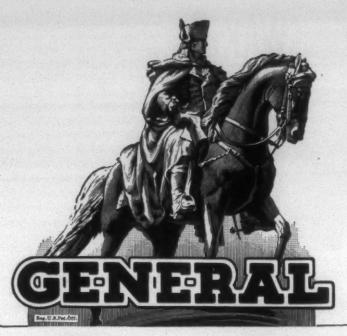
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Dianol G is a newly developed and versatile liquid detergent and wetting agent recently added to the line of Dianol synthetic detergents and wetting agents by Quaker Chemical Products Corp., Conshohocken, Pa.

When used with alkali builders such as tetrasodium pyrophosphate, Dianol





High grade gas, by-product and steam coal from Wise County, Va., on the Interstate Railroad.



High grade gas, by-product, steam and domestic coal from Wise County, Va., on the Interstate Railroad.



High grade, high volatile steam and by-product coal from Wise County, Va., on the Interstate Railroad.



A laboratory controlled product blended to meet exacting stoker requirements. From Wise County, Va., on the Interstate Railroad.

COKE

Roda and Stonega from Wise County, Va., and Connellsville Coke from Pennsylvania.



High grade gas, by-product, steam and domestic coal—Pittsburgh seam from Irwin Basin, Westmoreland County, Pennsylvania, on the Penna. Railroad.



Genuine Third Vein Pocahontas from McDowell County, W. Va., on the Norfolk & Western Railroad.

Genuine New River Smokeless, Beckley or Sewell seam from Raleigh County, W. Va., C. & O. and Virginian Railroads.



Hazard No. 4 and No. 7 steam and domestic coal from Wiscoal, Knott County, Kentucky, on the L. & N. Railroad.

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- * Triple Pick Counters
- A Rachet Counters
- & Rotary Counters
- A Slasher Counters
- A Tantas Counter
- ☆ Tenter Counters
- # Twister Counters
- ☆ Inspection Table Counters
- A Sewing Machine Counters
- * Yardage Counters
- A Folding Machine Counters
- A Hank Clocks
- ☆ Special Counters



+T. M. REG. U. S. PAT. OFF.

G is said to be one of the most efficient synthetic detergents available, on an applied cost basis, for use on all fabrics. It is rated as outstanding for use on wool fabrics, which it scours very well without builders at a pH of about 9.0. It rinses from all fabrics with extreme ease and no residual odor, it is claimed. Further, the manufacturer claims, Dianol G dissolves instantaneously in the coldest water, is stable in hard water and in acidic or alkaline solutions of conventionally used concentrations, and there is no excessive foaming when Dianol G is used in processes involving heavy circulation or agita-

The product is said to have no objectional characteristics either to personnel or to the processes in which it may be used. These are scouring, soaping-off, boiling-off, bleaching or any operation requiring a material that is highly efficient both as a detergent and wetting agent. Dianol G is also useful as an auxiliary with soap or soap base detergents to improve detergency and wetting under conditions chemically unfavorable to soap alone.

Pittchlor Folder Issued By Pittsburgh Division

A folder describing the uses of Pittchlor (70 per cent calcium hypochlorite) for precision bleaching and containing instructions on preparing a solution of Pittchlor and quantities to use to obtain precision bleaching, has been issued by Pittsburgh Plate Glass Co., Columbia Chemical Division, Pittsburgh 13, Pa. The folder, designated as Form A-702, may be secured by request.

'Cotton Magic' Is Book On Textile Processes

Cotton Magic, written by Mildred Gwin Barnwell and issued by the Jacobs Press, Clinton, S. C., should fill a need that has existed for a long time and which has been greatly increased during recent months. It is a simple, clearly expressed account of the basic processes in the manufacture of cotton textile products from the cotton boll to sales counter of the department store.

Mrs. Barnwell, who was executive secretary of the Southern Combed Yarn Spinners Association and seems to know her cotton textiles from fiber to fabric, has outlined here the essential mechanical principles of the cotton tex-

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tile industry with a clarity sufficiently great for the uninitiated to follow her with ease

As a text for industrial courses in high schools, for veterans training programs, and for the private student, this volume should prove a good introduction to the subject.

Solvay's Houston Office Will Serve Southwest

Establishment of an office in Houston, Tex., by Solvay Sales Corp., to serve as headquarters for Texas, New Mexico and Arizona has been announced. The Houston office, located at No. 847, M. and M. Bldg., will be in charge of Col. S. O. Taylor. Colonel Taylor, a veteran of World War I and World War II, recently returned to Solvay after having served as executive officer at Patterson Field, Dayton, Ohio. Prior to his latest period of Army service, he was employed for 11 years with Solvay's St. Louis, Mo., branch. Solvay Sales Corp. markets alkalies, calcium chloride and other chemical products manufactured by Solvay Process Corp.

New Uses for Ceglin Reported by Sylvania

Although Ceglin is used primarily as a finishing agent for cottons and rayons, reports from manufacturers in these fields indicate that it has other interesting uses throughout the entire finishing operation. While its chief importance lies in its properties as a finish on cotton and rayon cloth, Sylvania Industrial Corp. has reported that new uses are beginning to turn up which have an important bearing upon other finishing processes.

One manufacturer has successfully experimented with Ceglin in this way and has worked out a method for treating back gray cloth to reduce the absorption of paste and color during printing. When it is treated with Ceglin the back gray does not pick up as much of this seepage as untreated cloth, the manufacturer discovered. As a result, the back gray does not have to be washed so often, and, in addition, when it is washed, it stands up better under laundering, just as finished Ceglin-treated fabrics do.

Another manufacturer who had trouble indexing rayon cloth during printing discovered that by treating the cloth with Ceglin before printing, he could

ver 45 stabilize the fibers and in that way keep the cloth from shifting. As a result he obtains better register with no overlapping of patterns or colors. Now that Ceglin is becoming available in increasing quantities for civilian application, similar new uses are expected to be uncovered from time to time. Sylvania has established a technical service department to follow them up and to help manufacturers work out correct application procedures.

Many Mills Adopting Plyweld Picker Sticks

More than 200 textile mills throughout the country now are using Plyweld picker sticks on their looms, according to President W. Irving Bullard of E. H. Jacobs Mfg. Co., producer of the item made at the firm's Charlotte plant from laminated plastic with a sugar maple base.

"A woolen mill in Lowell, Mass.," states Mr. Bullard, "operating very wide looms on heavy blankets, consumed 3,100 hickory picker sticks in 1944 on less than 65 looms. Early in 1945 all of the looms were equipped

with Plyweld picker sticks and though operating three shifts per day this plant found it necessary to order only 251 Plyweld sticks in 1945. None has been purchased so far this year. . . . A large Southern woolen mill has equipped all of its Crompton & Knowles W-3 looms with Plyweld picker sticks and sweepsticks, after determining from actual plant tests that they outwear hickory 16 to one. Operating three shifts, this mill averaged six days for hickory picker sticks. . . . On Nov. 16, 1944, a New England mill installed a trial lot of 25 Plyweld sticks on C. & K. W-3 92-inch looms. On Feb. 1, 1946, 15 months later, after two shifts of 25 days per month, four Plyweld sticks averaging 43,500,000 picks, with a loom efficiency of 90 per cent, were

Plyweld sticks are custom-streamlined by the Jacobs company to produce any required or specified whip or flex. The type of streamlining used is called Streamline E and is 3/16 to ½ of an inch narrower than that of hickory. Its whip is described as equal to that of highest grade hickory, and is 1¾ times as strong.



French Textile Mission Tours Southern Mills

Production methods and facilities at White Oak Mills, near Greensboro, N. C., came in for considerable praise from the ten representatives of the French textile industry, now on tour of textile sites in this country, when their itinerary called for a stop at the mills. The French mission began its Southern tour in Danville, Va., where they visited the Dan River Mills. From Danville they went to Greensboro, subsequently visiting the Marshall Field & Co. plant at Leaksville, N. C., and mills in Charlotte and Gastonia, N. C. Visits to textile centers in Spartanburg and Greenville, S. C., also were scheduled before their return to New York. The French mission, which arrived March 12 from Paris, inspected New England mills before launching their Southern tour. The delegation is headed by Jean Delemer, president of the French Textile Association. Other members of the group are Pierre Peugnet, Bernard Parian, Francois Richard, Marc Giron, Andre Toulemonde, Hubert Laine, Phillippe De Witt, E. Carroll Rembry, Robert Delesalle and Claude Dupleix.

Rayon Cord Tires Lead in Survey

While the controversy over rayon vs. cotton cords in tires continues to agitate the trade and the editorial columns of newspapers, the majority of the car-owning public has apparently settled the matter in its own mind. According to the results of a nation-wide survey just completed, 55 per cent of the people prefer rayon cord in their tires while only 17 per cent favor cotton. The remaining 28 per cent are undecided. The survey embraced the opinions of 1,389 motorists. Conducted by the Graham Research Service for American Viscose Corp., the survey was representative as to geographic area, sizes of cities, makes of cars owned, and age and economic status of the people interviewed.

While the overall sentiment was three to one in favor of rayon, the opinion among men, whose opinion counts most in tire purchases, was four to one. Of those preferring rayon, almost 85 per cent did so for reasons of greater strength and wearing qualities. Closely related to this, the survey showed a high percentage of awareness as to the purpose of the cord carcass in a tire. More than 85 per cent of the answers to this question related the cord to some aspect of strength, durability, structure or support.

aspect of strength, durability, structure or support.

Confirmation of this interpretation is found in the answers to the question: "Which construction features do you



consider most important?" Only 15 per cent of the people regarded the type of tread as most important, 34 per cent thought the rubber composition (natural or synthetic) should come first, while a total of 50 per cent rated the type of cord or the number of plies as most decisive. Even in the South, where favoritism for cotton might be expected to predominate, almost twice as many people preferred rayon in their tires. The figures were 25.3 per cent for cotton, 49.7 per cent for rayon, and 25 per cent undecided. Compared with the 85 per cent who favored rayon for reasons of strength and wear, only 54 per cent of the cotton advocates expressed their preference in these terms.

Good Mill Lighting

(Continued from Page 24) the looms, which would be sufficient for the production of normal weights of fabric. However, should extremely light weight fabrics utilizing fine numbers of warp yarns be in production, the use of three-tube fixtures will increase this lighting intensity by nearly 50 per cent with the result that you will obtain approximately 35 foot candles of light on the loom.

In going to the wide looms it has been found that a continuous row of lighting extending across the mill, and again parallel to the warp of the loom, will give a reasonably high intensity of light that will, as in the case of the narrow looms, provide light on all the working parts of every loom in the room, which is a great advantage to the loom fixers and in turn permits them to get the looms going after repairs in a much shorter period of time than could possibly otherwise be the case. The third sketch shows such an arrangement, and by this arrangement it may be seen that this lighting also avoids conflict with belting and shafting in case of such type of drive, or, as in the case of the narrow looms will work to better advantage with individual drives.

With this article the writer concludes this series on "Good Mill Lighting" and desires to take this opportunity of thanking those of you who have made comments on these articles. You are invited to write us about your problems concerning any light job you might have. In following issues we expect to take up a descriptive discussion of the various types of lighting fixtures for the general benefit of the textile industry.

Report Details of German Testing Methods

A single numerical wear index, combining the results of nine or ten different tests of textile products, had been developed by German experts, the Office of the Publication Board, Department of Commerce, has announced. The numerical values presented by the Germans may not be applicable in the United States, because economic conditions and the kind and supply of fibers in Germany are different. However, in the opinion of the investigators,

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CHARLOTTE, N. C.

"the German textile technologists had arrived at several concrete solutions."

The techniques developed by the Germans to test fabrics and sewing threads are explained in Report PB-12963, Serviceability of Textile Fibers in Germany, by Herbert F. Schiefer and Richard T. Kropf. The 44-page publication contains 19 pages of diagrams and graphs illustrating the different instruments and tests devised by the Germans to evaluate various properties of fibers, yarns, and fabrics. The report is obtainable, on order, from the Office of the Publication Board, Washington, at \$3 per photostat copy, and at 50 cents per microfilm copy.

Research on knitted fabrics, particularly men's hose, carried out by Schachenmayr, Man and Cie, at Salach, the report says, involved a combination of three methods to determine serviceability: (1) performance tests when actually worn; (2) wear indices based upon the combined results of a number of laboratory tests of yarn and knitted fabric, such as tests of the breaking strength of wet and dry yarn; and (3) systematic studies of the effect of such factors as ply, yarn size, twist, blend of fibers, and denier of rayon in blends. A similar application of this technique has been developed independently for sewing threads by the research department of Guetermann, A. G., at Gutach. Sewing threads made of different fibers were evaluated on the basis of results of tests of seven different properties of the thread. Data on research on the comparison of sewing threads by the Reutlingen Research Institute in Germany are also included in the report.

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Claims Cotton Weaving More Profitable

That there is more profit in weaving cotton than rayon, despite the fact that some cotton men have shifted to rayon, is the belief of an Office of Price Administration spokesman who testified before a Senate subcommittee recently. The subcommittee to the Senate Agriculture Committee was investigating the shortage of cotton clothing.

The O.P.A. has not checked on profits in rayon weaving since price ceilings were fixed in 1941, Gordon Ackley, price executive of the textile branch, explained, because there has been no industry request for higher prices. He read Bureau of Internal Revenue figures to show cotton sales profits were higher than rayon profits from 1940 to 1944. Later figures were not available, he said. Production of rayon yarn has increased while prices went down, he added, attributing this to increased uses for rayon. Predicting that

1946 "unquestionably" will be more profitable than 1945 for cotton manufacturers, Deputy Price Administrator Geoffrey Baker declared present textile profits were "four to five times" as high as in 1939.

Industrial Rayon Increases Capital Stock

Stockholders of Industrial Rayon Corp. at their annual meeting March 27 re-elected present directors of the company and authorized an increase in the company's capital stock previously recommended by the directors. This provides for an increase in the authorized shares of common stock from 1,200,000 shares without par value to 3,000,000 shares having a par value of \$1 per share. Stockholders further approved the split-up of the 759,325 shares of common stock outstanding so that each share will be changed into two shares of the newly authorized \$1 par value common stock. This will bring the number of new shares outstanding to 1,518,650. The balance will be available for issuance when and if needed in connection with any future expansion of the company's production facilities.

Radio Program Salutes Wool Industry

The wool industry was paid tribute recently, when the radio program, Valley Forge Caravan, devoted its time on the air to a resume of the industry's history and potentialities. This one of a series of salutes to American industries traced the growth of sheep-raising and wool processing in all countries in which the industry has been and is a major economic factor.

A shipment of hand-made textile products, including rugs, bedspreads, women's handbags, table runners and woolen piece goods, has arrived at the North Carolina State College school of textiles from the province of Quebec, Canada, Dean Malcolm E. Campbell, head of the school, has announced. The array of textile goods, made by the Canadian Handicraft Industry, will be used as a part of an exhibit which is being developed for the purpose of stimulating interest in the manufacture of textile specialties with the use of modern, power-driven equipment in North Carolina, Dean Campbell asserted. Funds for purchasing the exhibit material were made available by the North Carolina Textile Foundation, which is supporting the extensive program of textile education and research now in progress at the textile school.



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Cotton Goods Market

The issuance of the export phase of M-317A was received in Worth Street with some disappointment. A few exporters thought that a reduction at this time will harm our foreign business, though there are others who feel the nine per cent cut will be more than offset by the slow but steady improvement in mill production being registered throughout most of the South. On the other hand, it is pointed out, mills and their sales representatives thought the cuts were too conservative. It is generally felt that the slight reductions on such goods as print cloths and drills were not in line with what should have been done in the face of the heavy demands being made for these goods on the domestic markets.

Though the Office of Price Administration has issued an official clarification on just how to compute the new gray goods prices, there is still considerable difference of opinion on just how to go about it, it is pointed out in Worth Street. Some houses are calculating their prices on a cents per pound basis, saying that this is the historical procedure under Schedule 35, while others are doing it on a cents per yard basis as ordered by O.P.A. Though the final prices reached differ only slightly, it is agreed in many sections of the gray goods trade that some uniformity should be adhered to. After all the confusion and delay the market has been forced to go through as a result of this whole pricing question, the O.P.A. should take it upon itself to calculate and issue prices, some in the trade assert.

Though most houses handling ducks are pretty well sold up tight through the first quarter, most of them are waiting hopefully for some sign from Washington that hose and belt ducks will be brought under the incentive list before contracting further. Unless these highly important industrial fabrics are given the additional five per cent price, it is pointed out, they cannot be produced at a profit and the only result will be a curtailment of output. So important are these ducks, it is said, that the rubber industry, alarmed at the possibility of even less supply of these goods, is putting pressure on Washington to have them brought into the incentive list.

The recent O.P.A. action of issuing an amendment stating that any mills selling osnaburgs and most Class A and B sheetings finished cannot charge the five per cent incentive premium, brought various reactions in the gray cloth market. Several houses expressed complete surprise that the price agency should come through with such a move just when mills and their sales representatives were getting ready to sell second quarter, once they had seen M-317A. There were others that had nothing but words of praise for this regulation.



Cotton Yarns Market

Several spinning establishments have increased their daily shifts from eight to nine hours, sources in the cotton sale yarn trade disclose. These are said to be Band A mills that are taking advantage of recent ceiling boosts.

It has been said by various men in the Philadelphia market that when an increase in working hours is found possible, the tendency will be to lengthen hours on existing shifts rather than attempt to establish and maintain a third shift. Despite scattered reports of slightly better success in enlisting additional workers, the opinion is often expressed that many mills still cannot set up a third working force and depend upon consistent performance of employees. While improvement has been noted, the mills still feel they cannot depend on the average employee for a full work

There is also much discussion in the trade these days concerning the need for increased effort on the part of mill hands. One leading figure in the market points out that some mills have increased wages by 60 per cent since 1939 while man hour output has climbed roughly 3/10 of one per cent during the same period.

The 45-day inventory limit applied under PR-32 has received additional praise from one yarn dealer, who stresses that certain firms have taken advantage of production stand-stills during strikes to build up sizable inventories of yarn, while others still operating were in dire need of bare essentials. Such policies will now be prevented under the imposed limitation.

Export-minded handlers of sale yarn find themselves up against the proverbial stone wall in their efforts to promote or complete re-opening of foreign trade. While often termed a minority group, there are some in the market who have pointed out the necessity of gaining a foothold in overseas markets. Proceeding on the argument that there is a big opportunity in world trade, they have attempted to rouse the trade to divert small quantities of yarn for development of foreign business. Such outside markets, it has been said, will prove worthwhile, even necessary, over the long pull.

Spinners, generally, and many distributors have been reluctant to engage in such exploitation. Mill men, too, usually refuse to ship abroad while the domestic need is largely unfilled. The fear is expressed, however, that unless the United States makes some effort to secure foreign accounts, other nations will step in and grab the bulk of the available business.

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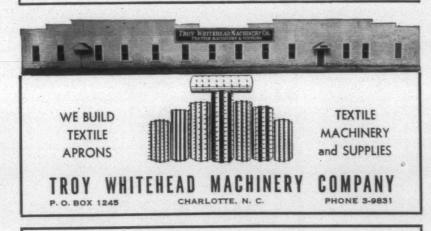
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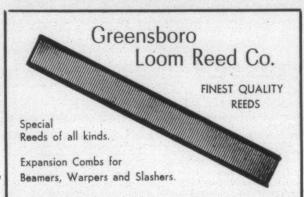
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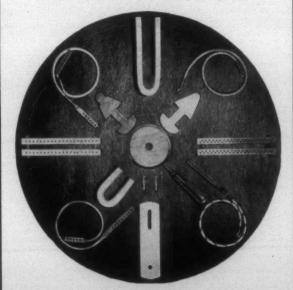
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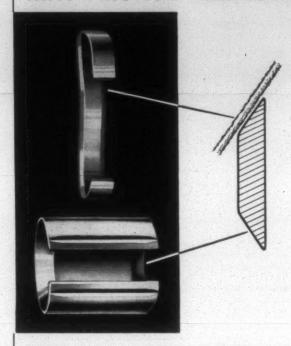
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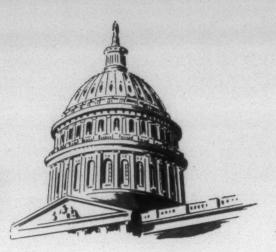
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[Exclusive and Timely News from the Nation's Capital]



PRESIDENT TRUMAN IS SHIFTING HIS SIGHTS. He is turning from the ready-made reconversion legislative program put before him by Wallace, Hannegan, Hillman, Murray and Bowles, and advising with Secretary Vinson and Reconversion Director Snyder. He is making an attempt to bring new and big men of business and finance into the Administration; he's angling for Mutual Life's Lewis Douglas and New York Life's George Harrison.

Most difficult economic problem facing Congress and the Administration is the extension, as proposed, of price controls beyond June 30. Even sharp revision in the law's burdensome clauses will scarcely be sufficient to immediately check the "creeping paralysis" spreading through industry from delayed price adjustments, shortages in parts and accessories, and collateral idleness caused by strikes. Little real relief is in sight until production overtakes demand in vital necessities, and that seems still many months away.

The President is taking a direct hand in the matter. O.P.A.'s new administrator, Porter, has direct instructions to get the kinks out of price controls, allow raises in ceilings to cover higher costs, and act in time to cool the determination of Congress---at least in the Senate---to rip the existing law to pieces, and drastically rewrite it. However, Porter's task appears too big for action to head off the determination of Congress to put rigid administrative restrictions and control terminations in the law.

New and complex problems are just ahead in the strike settlements. Severe shortages exist in parts and vital accessories. Many fabricators are struggling with wage and price problems. Delayed price adjustments are making heavy drains on some firms, with indication that even with price petitions are granted, higher material costs will require further revision. The industrial system is gradually slowing up.

Industrial output in January dipped to the lowest point since early 1941. Much production is irretrievably lost and a "thaw-out" is at least months away. C.P.A. Administrator Small says strike effects must be felt for many weeks to come, with needed price adjustments adding to the problem.

Bitter and impassioned debate in the Senate over the minimum wage bill was probably tame compared with the fight in prospect when it comes up in the House. Farm groups are massed in solid opposition. Farm state members will make a last-ditch fight for a 50-cent floor, contending a higher rate will deprive farmers of labor and that a higher minimum is not possible as long as price controls remain.

John L. Lewis is set for a coal strike on the issue of an insurance and health subsidy from the operators of about \$65,000,000 a year. The "Petrillo Bill," agreed to in House and Senate conference, would make such exactions illegal, but Lewis insists they're legal if covered by contract. He's willing to take his chance on a court test. This strike may be long drawn out. Both sides are determined and far apart.

C.I.O. as a political force is beginning to wane. Hannegan is still leaning on it as a mainstay in the 1946 election, but the President has been advised by his close friends in Congress to clean house of C.I.O. domination or face coalition resistance. C.I.O.'s threatened purge of coalitionists is already backfiring.

1946 will be more profitable than 1945 for cotton textiles, Deputy Administrator Baker, of O.P.A., told Senator Bankhead's com-

mittee investigating cotton clothing conditions.

The Treasury has joined O.P.A. in war on the textile black market, with the Internal Revenue Bureau on the trail of tax evaders. Buyers of illegally priced piece goods cannot claim deductions from taxable income. Treasury agents will carefully check invoices offered in support of business expenses to see that transactions are bona fide. The Attorney General has told F.B.I. to assist the Treasury.

Prestige of the Treasury is rising. Suggestions of the old atmosphere, of assurance, fixed objectives, clear vision and sound fiscal insight—of the days of McAdoo, Glass and Mellon—are reappearing. There's long-range planning and careful calculation of risk potentials. Vinson is showing a steady, able hand, and moving to throw out the remnants of deficit spending and pump priming. There's growing confidence in him and his policies.

Federal spending is falling below estimates, and will run about \$2 billion less for the fiscal year than the President expected. Treasury income is running well ahead of expectations, and may top \$4 billion in June over the January estimate. Deficits are declining almost to the vanishing point, and the House Appropriations Committee is cutting spending to the bone. Government finances in July will be about \$5.7 billion better than was expected in January. A balanced budget is in sight, starting with July.

Treasury's Under Secretary Gardner is handling tax policy matters, and will be the Treasury's liaison officer in dealing with the tax committees of Congress in shaping tax legislation. Mr. Gardner is seeing much of Senator George and Chairman Doughton and action on taxes in 1947 is under discussion. There is no admission that tax revision is in sight, but the increasingly favorable position of the Treasury makes such action possible. It could come in December.

Countless pressure groups arrayed against Congress, ranging from one-man outfits to big high-powered compartmentalized organizations, are facing a sweeping inquiry. Representative Smith of Virginia has brought in a resolution under which everything engaged in laying down lobbying barrages, from seekers of health insurance to C.I.O.'s vast assemblage, would come under the spotlight. The resolution is slated to be given the green light by the House.

Few, if any, changes will be made in the Social Security program as a result of hearings in progress. The present two per cent payroll tax will probably be continued for ten years, coverage will remain at about its present scope, and benefits will be frozen at about the present rates. Proposals for national health insurance will not be adopted. The Treasury is violently unwilling to assume larger Social Security commitments for at least ten years.

Next group to face the searchlight will be the tax-exempt organizations, ranging from retail trade and labor unions to vast foundations and co-operatives. Inquiry will cover state and municipally-owned plants and business ventures, endowed universities and religious corporations. The inquiry promises to be sensational and spectacular, and to uncover billions of dollars in business activity escaping Federal income taxes.

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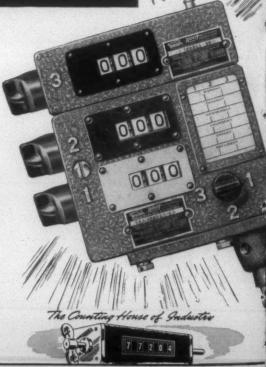
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